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Editorial

Wayne Hugo

As Higher Education professionals engaged in teacher education, we still labour under the whip of the Apartheid legacy. NPDE, ACE and soon to be ADE level qualifications teem with souls in need of helpful tugs upward into the paid glory of full qualification. We know the upgrade is vital so we soldier on, pushing our teaching colleagues through weekend after weekend, holiday after holiday until eventually they can graduate, and what a time of celebration it is. Unlike our privileged graduands, who expected the day to come as a matter of course and who often do not arrive for what was always destiny, the ACE and NPDE students come in splendour with families and friends attached, only to find themselves in lengthy queues, quickly passed on the stage with names mostly mispronounced and ululations from the audience frowned upon. What the actual impact of this massive process has been is sadly anyone's guess, but most of us would support Cheryl Reeves and Maureen Robinson's contention that a specialised knowledge base is vital for these teachers and indeed for all South African teachers. Long periods of serial abandonment combined with erratic and shifting fixes has meant that half our teachers have a complex mixture of under-qualifications. Reeves and Robinson provide a lucid and nuanced account of what this under-qualified landscape looks like as well as their own take on what to do about it. Whether in primary or secondary education, teachers need a strong conceptual and knowledge base to carry their learners from localised existence into specialised knowledge and practice. Reeves and Robinson emphasise subject knowledge as the chief medicine needed to reconstitute teacher identity. It is precisely this delocalised conceptual knowledge that will give teachers the ability to negotiate their way through the complex terrains of grades, phases, schools and continual shifts in policy. If learners are not inducted into foundational conceptual understanding at an early age, teachers at higher levels will struggle. It is a classically hierarchical argument. The whole system – primary and high, vocational and academic – should ensure a focus on disciplinary knowledge – and this should start as early as possible because there is a long specialising ladder of consciousness and skill to be climbed.

Is it just me or is this not a case of we narcissistic intellectuals gazing fondly into the mirror and projecting our own academic image of education as a love object? Primary school was a place where life was lived to the full, where the smallest slight went deep, where friendship was all important, where teachers took on cathected energies, and days stretched ever outwards in playfulness rather than hard ladders. But rather than rehashing Rousseau against Bernstein let's take the hierarchical argument on board and make a distinction currently not in popular academic

discourse. Hartmann, in his forgotten classic New Ways of Ontology (1952) makes a key distinction between two ways hierarchal levels work. Superinformation works in the way that Reeves and Robinson characterise the growth of conceptual understanding. It takes what has already been learnt as material for a new and higher level. It includes this understanding and then moves onto a higher level that depends on this understanding but also produces something new. If the foundational material is not mastered and included then the new levels cannot be properly reached and, as Reeves and Robinson put it, "if learners lack a solid foundation in primary education, they can be doomed to a lifetime of disadvantage". There are strong hierarchical logics at play here that cannot be ignored. However, Hartmann points to another way that hierarchical levels work that throws a strange light on the obviousness of the above. He calls it superimposition. Here the emerging level radically breaks from the level underneath it and starts something new with its own logics that are not dependent on those that came before. It rests on the level below it, needs it, is carried by it, but does something completely new. There is still a foundation, but not one that needs to be carried over into the next level. Worse than this, the logics of the lower level could actively prevent accurate understanding of the new level as the logics and concepts are completely different. So, for example, when a psychological level emerges above the physical and organic levels, its operating principles are not those of atoms or organs but of mind and character. It rests on atoms and organs but works on principles radically emergent and new. Imagine the full hierarchical complexity of the educational world and hold a superimposition lens over it as well as a superinformation lens and then something in the logic and obviousness of Reeves and Robinson (and it should be mentioned – Bernstein) trembles. New levels often do not use the lower levels as material for new constructions but do something new, something different that might rest on the lower level but not use it. Radical novelty breaks through the call for continual ascent from the local to the abstract. New possibilities open out that rest on the foundation but are different to them, offering the promise of something new starting again from first principles, something new that does not need basic algebra, the periodic table, or mitosis. The importance of lower, foundational concepts lose their immoveable status as the new beckons without inclusive conditions attached. If something like superimposition holds in the shifts between foundation, intermediate, senior and graduate phase then we have hierarchical grounds for being careful about assuming the obviousness of needing disciplinary knowledge all the way through the system. Foundations are still needed, but possibly the foundations do not have to resemble the end specialisation awaiting the learner. Maybe the foundations are completely different to the drive for specialisation? Abstract disciplinary knowledge grows on top, but in a disjunctive rather than inclusive manner. A foundation phase teacher, intermediate phase teacher and senior teacher are very different creatures not necessarily beholden to each other on the same ladder of abstraction; the earlier exist more as strata for the higher, not as levels. It's not that the hierarchical logic of

superinformation does not operate in the education system, only that we have not thought through its intersection with superimposition carefully enough. Ironically, a better understanding of these different hierarchical logics can result in an opening out to a freer, more playful and differently specialised world that does not lock step us into the end from the beginning. What we are recommending for our kids success is something we did not need to be successful. To push for kids to start climbing the ladder of abstract knowledge from the beginning of their educational journey is to misunderstand how hierarchal strata work and to falsely assume that the beginning has to be similar and included in the end as a first step of a very long ascent. We never climbed such a ladder ourselves, things were always newer and more surprising than that. There was always the possibility of something emerging that did not need yesterday, last week, last month, last year, to be included as a part of it, and its best we do not forget how little we often needed the history of our own learning when faced with something fresh.

I have taken a small section of Reeves and Robinson to make an esoteric point that does not impinge on the excellence of their article as a whole. There is a reason why it is the first article of volume 50, and that is its demonstration of subtle intelligence, clear reasoning and extensive research on the exceptionally messy area of teacher qualification that has not been illuminated in this way before. I also suspect they would agree with the implications of superimposition, as would Bernstein, its just that we sometimes forget one logic for another, especially when they are close.

Edith Dempster and Sandile Zuma point to a similar lack of subject knowledge in our teaching cadre, except they do it through a fine-grained analysis of learner responses to science questions taken from TIMSS. Learner responses to eight multiple choice questions and four free response items (administered in both isiZulu and English) are put under the microscope. The article points the way to a fuller understanding of processes our learners engage in when working through questions as well as providing a comparative dimension to other learners across the world who have answered the same questions. Each question is a microcosm, throwing up particular logics and patterns of response, but it is clear, after the overall picture emerges, that our learners have very poor subject knowledge. We already know this, but seldom has a searching light been thrown on what the learners actually do when faced with their own ignorance. They work with whatever patterns they can glean from the text to make calculated guesses. The problem is that the patterns they find are not related to the knowledge structure but to linguistic, cultural and contextual similarities. Example 4 demonstrates this.

Which of the following organs is NOT situated in the abdomen? A liver; B kidney; C stomach; D bladder; E heart.

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A slight shiver runs from my ribcage to my groin: abdomen, what's that? Don't insects have abdomens and thoraxes and we have stomachs and chests? I look down in alarm at the only part of me still growing. Where does this abdomen thing start and finish? I am not sure but I know it sits somewhere in my expanding middle. So what's uppermost on the list? Heart. What's lowest? Probably bladder. All the others are definitely in the squishy middle. Heart?bladder?heart?bladder? Definitely heart, it's in the chest. My parts of the body knowledge is slightly shaky, but I can get to the answer based on a marginally out of focus frame. Don't laugh, like you know for sure which one is higher – liver or kidney – and exactly what they do? The point is that you would expect kids who have some picture of how the parts of the body work to mostly get the answer right (Heart) and some to get it wrong. But out of the incorrect answers you would expect Bladder to be the most popular choice, because it is on the border between abdomen and pelvis. This is exactly what happens across the world but not in South Africa. If you do not know what the abdomen is and cannot guess because the set (liver, kidney, stomach, bladder) does not help you with a regional location then what do you do? The translation (kwi-abdomen) does not help you either, so you have to use other criteria that are not knowledge based, and this is what Dempster and Zuma open out for us – the strange world of attempting to answer questions with an absent or minimal knowledge base.

Anne Hill works with Charles Taylor's latest magnum opus A Secular Age. It's his retirement swansong in which he tracks the rise of secularism as the dominant narrative of the Western world. What makes the detailed historical account so fascinating is the various hybrids within Christendom that open out to the secular in all sorts of weird and esoteric ways. It breaks any tendency to work in dualisms as the varieties in the middle open out to display. This open middle is hard to keep clear when working in briefer article mode and so we find Anne Hill working the split between pre and post modern selves, or what Taylor calls the 'porous' and 'buffered' self, rather than the rich in-between. The porous self works with logics similar to Durkheim's 'mechanical solidarity' where identity is collective and maintained by consensus and outer forces threaten the stability of the social world, demanding conformity at the risk of expulsion. The line between self and other, inside and outside, dead and alive, is permeable. With disenchantment came a strengthening of boundaries and specialisation of function in 'organic solidarity'. The self is taken out of a world vulnerable to spells and charms with angels and ancestors looking over us and into a world of specialisation that is delocalised and individualised. The buffered self grafts the world in its own terms, independently charting a self determined path through personal choice and self discipline. If Reeves and Robinson reveal the need for disciplinary specialisation in our teaching and Dempster and Zuma reveal the impact of this lack on our learners, then Hill opens out for us the type of modern self needed in the specialised world.

Gavin George, Kaymarlin Govender and Candice Reardon explore how educators engage with high school learners on HIV/AIDS and sexual practices. They analyse the factors that result in more effective engagement derived from 843 questionnaires in 34 schools across two districts. Younger educators interact more with learners around HIV/AIDS but also have more at risk behavior patterns themselves. Other factors associated with favourable educator/learner interactions are lower job categories, good knowledge of HIV/AIDS, experience of HIV/AIDS and low stigmatising attitudes.

In juxtaposition to this quantitative and statistical analysis, Jenny Reed and Jean Baxen provide a qualitative case-based study on evaluations of HIV/AIDS intervention programmes. They are critical of outcomes based approaches that measure behaviour change rather than more holistic and process-based evaluations that ask more complex and less measurable questions.

Ike Xaba takes a look at the consequences of shifting financial accountability to the school governing body. This would be fine if there were specialised budgeting, accounting and reporting expertise in the body, but many of our governing bodies are financially illiterate. Legislation like the Schools Act mandate schools to manage school funds but law cannot cover for lack of specialisation. The democratic attempt to make schools take control of their own finances falls down because the modern world does not work by just shifting responsibilities downwards. Some responsibilities are specialised and need specialised people to do them. Ignoring this results in a blame game where all accuse the other of incompetence while in between the money goes by, unreported.

What theorists and researchers would you use to analyse and evaluate teacher guides, textbooks and other support materials? In South Africa we tend to use theorists like Halliday, Bernstein, Janks and Fairclough. A link is made between the varieties of discourse analysis and textbook analysis. This produces some interesting work as Sandra Stewart and Maropeng Modiba demonstrate in their analysis of teacher guides for English Additional First Language. They show how the teacher guides work procedurally with the National Curriculum Statement and do not make explicit what is needed to fully complete tasks for the teacher or the learner. As useful as this is I would like to see the use of instructional design theorists who understand the inner workings of learning material, who provide clear criteria for recognising when knowledge and its steps are made explicit or not, and when it is effective or not. Gagne, Ausubel, Merrill, Wiggens and van Merrienboer are a far more focused set because their area of expertise is the design of learning material, not discourse analysis.

The fiftieth volume of JoE ends with a discussion of an international 22 country survey known as the Changing Academic Profession Research Project (CAP). Luckily it was not called Change Research on the Academic Profession. Van der Walt, Potgieter, Wolhuter, Higgs, Ntshoe and Higgs open out how education academics compare to the rest of the ivory tower. A strong finding is that we publish less than our colleagues. I have heard many reasons for this from defensively irate academics in publish or perish management bashings ranging from internal reasons (such as the professional nature of our work, demands of teaching practice, rigours of marking, commitment to students) to external reasons (like how science articles are only three pages long and consist of a minor variation in an experiment combined with an equation). Van der Walt and crew pick up another angle emergent from CAP that I have not heard before. They note that educators are slightly happier with their working conditions than other academics, happier with top management structures, relationships and communication, happier about their current jobs as a whole. Their colleagues in other disciplines and faculties are less happy but publish more. I can hear a cry going up across education faculties. "We knew it, publishing makes you unhappy!" All those nights spent writing articles rather than sleeping, playing with your kids, fornicating and getting drunk come at the cost of happiness. Higgs et al. disappointingly don't take this promising path but point to another surprising variable – the perceived lack of influence at the closest management level (department) in comparison to non-education colleagues. I knew it! My colleagues from other departments work according to semesters - holidays are holidays, work is work. Lectures occur during the normal week. They do not have the demands of teaching practice, ACE and NPDE work, Masters and Honours courses that run on weekends and holidays. Lucky they are, luxury is what they have! I dream of having a holiday without teaching.

Reference

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Am I 'qualified' to teach? The implications of a changing school system for criteria for teacher qualifications

Cheryl Reeves and Maureen Robinson

Abstract

This paper is located within the broad discussion on supply and demand of teachers in South Africa. It draws on a study that was done in the Western Cape in 2008 which asked if the province had sufficient qualified teachers appropriately deployed in its schools. The study found that clear criteria for 'being qualified' to teach specific learning areas or subjects in particular school phases did not exist and in fact were difficult to define. Many schools grappled with allocating and timetabling existing staff with subject specialisations obtained under a different system, into new areas of the school curriculum. The paper argues that, with the changing landscape of teacher education and schooling, the concept of teachers being appropriately qualified for their posts is more than a numerical calculation of years of study or formal qualifications. It includes considerations of the changing rules of qualification structures, the qualification routes of 'old' and 'new' teachers, the demands of the curriculum and expectations of new forms of interdisciplinary knowledge, and the epistemological basis of teachers' professional identity.

Introduction

This article emerged from the experiences and findings of a research project in the Western Cape (CHEC, 2009) which aimed to gauge whether there is a balance between the number and type of qualified teachers entering and leaving the system each year, and whether all posts in public schools are filled by appropriately qualified teachers.

Interest in the question arose partly from the awareness that most studies of the supply and demand of teachers conducted in South Africa are based on aggregated data (Paterson and Arends, 2009; Shindler, 2008; Peltzer, Shisana, Udjo, Wilson, Rehle, Connolly, Zuma, Letlape, Louw, Simbayi, Zungu-Dirwayi, Ramlagan, Magome, Hall and Phurutse, 2005). Aggregated data, while useful for reflecting general trends, do not fully illustrate the real demands of schools and the system, for example the link between teachers' qualifications and the fields of specialisation and/or level/s of schooling in

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which they are actually teaching. Thus a crucial dimension of the CHEC study was assessing the degree of 'match' between teachers' qualifications and their subject and school phase¹ specialisations, and the grades and learning areas/subjects which teachers were teaching.

The study was conducted during 2008 and covered a total of 151 schools in one rural and one urban district of the Western Cape. Four thousand, five hundred and forty-five teachers completed questionnaires indicating their prior qualifications and their current field of work. The study also included a survey completed by 641 principals, a questionnaire administered to graduating student teachers in 2008, as well as data obtained from the four Higher Education Institutions in the Western Cape on the number and type of student teachers graduating in the past three years; these findings are, however, not reported on here.

The assumption underpinning the idea of matching teachers' qualifications to their actual teaching responsibilities is that a teacher holding a formal qualification in a particular learning area or subject and school level is better prepared for teaching that subject at that level than a teacher who is not qualified to teach the subject at that particular level. This conception of 'being qualified' is one that places teachers' specialised knowledge-base firmly at the centre of their professional identities.

Underpinning this conception is the notion that a strong link exists between teachers' specialised knowledge-base for teaching and learner achievement (teacher effectiveness). This link, which is widely assumed, has been identified in South Africa (see, for example, Carnoy, M. and Chisholm, L. 2008), and in studies elsewhere (see for example, Carnoy, 2007; Morais and Pires, 2002; Reimers, 1993). The link also appears to be corroborated by studies in South Africa which have identified teacher qualifications as correlated with learning outcomes. For example, Crouch and Mabogoane (2001) identified teacher qualifications as strongly correlated with Matric (Grade 12/Standard 10) results. The Progress in International Reading Literacy Study (PIRLS) 2006 found that learners taught by language teachers who reported having post-graduate degrees showed an 'improved overall mean performance' in comparison to learners whose teachers were not as well qualified (Howie, Venter, Van Staden, Zimmerman, Long, Scherman and Archer, 2007).

The South African school phases are: Foundation phase (Grades R1-3), Intermediate phase (Grades 4-6); Senior phase (Grades 7-9); and Further Education and Training/FET (Grades 10-12).

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The interest in ensuring a systematic knowledge-base for teaching has been supported by a number of South African policy initiatives aimed at improving learners' achievement. For example, National Curriculum Statements, adopted in South Africa in 2002, marked a shift from an outcomes-based curriculum model where content was not prescribed, towards a more structured knowledge-based curriculum which fore-grounds the development of subject knowledge. The systemic assessment of learners in Mathematics and language/s has been introduced to check learners' competence in these two subject areas.

A key challenge in analysing the data on qualification histories from the teachers' questionnaires for the Western Cape study was gauging the number of teachers who were teaching learning areas/subjects and/or grades for which they were not qualified, or were under-qualified. This challenge emerged from the fact that many teachers in the system have qualifications which did not originally equip them to teach the new school curriculum, as well from the history of changes in the landscape of teacher qualifications in South Africa.

In the first section of this article we track some of the difficulties associated with matching teachers' qualifications with the subject areas and phases in which they are teaching. We approach this first by discussing current conceptions of 'being qualified' according to South African policy documents. We then detail past and current changes in qualification requirements, as well as historic differences in the qualification routes that teachers have taken, to illustrate how difficult it is to equate teachers' qualification status in the current context. We outline the ways in which the fragmented qualification pathways of older teachers, together with more recent curriculum and school system changes, make it difficult to define teachers' specialised identities and match teachers to posts.

Later in the article, we discuss some of the implications of the lack of clarity in criteria for evaluating this dimension of teachers' qualification status for the nature of teachers' work identity, autonomy, flexibility and effectiveness across different school contexts. We argue that the qualification histories of teachers in South Africa and the current school and curriculum changes are not only technical issues of matching, but have impacted in particular ways on the epistemological basis of teachers' identities as professionals.

The current definition of 'being qualified'

In terms of the Department of Education's (DoE) Employment of Educators' Act No.76 of 1998, the current definition of 'adequately qualified' for the appointment of teachers in public schools, is a three-year post-school qualification which includes appropriate training as a teacher. Criteria for evaluating teachers' qualifications for salary scale purposes through the allocation of a Relative Education Qualification Value (REQV) are provided in the *Criteria for the Evaluation of Qualifications for Employment in Education* (2000).

Essentially a teacher's REQV status reflects the number of years of post-school study a teacher has completed, and whether the teacher (a) has recognised qualifications and is qualified in terms of minimum requirements; or (b) is un- or under-qualified. Currently REQV level 13 (Matric²+3 years training) is the minimum requirement, or minimum level of credentials. An inservice under-qualified teacher is currently defined as REQV 12 (Matric+2 years training) or lower (i.e. REQV 10/Matric, no training and REQV 11 (Standard 6, 7, 8, 9³+2 years training).

In this conception of 'being qualified', teachers' professional status is determined by formal accreditation in the form of a recognised degree and/or diploma. In theory, a REQV level 13 currently signals an acceptable, generic or shared professional identity for the teaching force as a whole.

The changing rules for 'being qualified'

The norm for all qualified teachers in South Africa is soon to shift upwards. The *National Policy Framework for Teacher Education* (DoE, 2006) states that the minimum requirement for qualified teachers is to become REQV level 14. New teachers in training currently require either a four-year professional Bachelor of Education (BEd) degree or a three-year undergraduate degree + one-year post-graduate diploma. In other words, teaching is to become a graduate profession for all new teachers.

Matric is Grade 12 or Standard 10.

Standards 6, 7, 8, 9 are Grades 8, 9, 10, 11.

The recently legislated Higher Education Qualifications Framework has renamed the Post Graduate Certificate in Education (PGCE) an Advanced Diploma in Education (ADE).

For older in-service teachers who have current experience in schools, the main route presently available to upgrade their qualification status to Matric+4 is the Advanced Certificate in Education (ACE) at universities. The challenge of meeting this requirement is evidenced by figures provided by Carnoy, *et al.* (2008) who indicate that less than half (47,9 %) of 359 260 teachers in the country had an REQV 14 qualification in 2004.

However, a teacher's REQV status does not reflect individual differences in the actual routes taken to achieve an equivalent REQV status. The process of verifying teachers' academic and professional qualification certificates for the Western Cape supply and demand study in 2008 highlighted how the segregated and uneven education system that existed under apartheid also produced inequalities in terms of the types and levels of teacher qualifications for the various education departments.

The history of teacher qualifications in South Africa

No such thing as formal accreditation of teacher education appears to have existed in South Africa until the National Education Policy Act 39 of 1969 was enacted, and the Committee of Heads of Education (CHED) was given the power to advise the Minister on policy regarding teacher education. After 1969, the Department of Education and Culture (DEC) of the House of Assembly (HoA), which only served learners classified as white, used the CHED to develop the *Criteria for the Evaluation of South African Qualifications for Employment in Education* for evaluation purposes.

Essentially the system for accreditation of teacher education that was developed in the pre-1994 dispensation was designed mainly to accommodate teachers trained for HoA schools (for whites). However, there were more than fifteen other different employing authorities for teachers in the country as a whole (including provincial and homeland⁵ education departments). In terms of accreditation of qualifications, there was no co-ordinated accreditation between the various apartheid education departments (Reeves, 1993).

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Regions set aside within South Africa to separate black ethnic groups from white dominated South Africa.

Most other education departments in South Africa followed the same Advisory Committee for Universities and Technikons⁶ as the HoA system, and the CHED route, for obtaining recognition and sequencing of qualifications. However, as accreditation was not actually co-ordinated between departments, and no cohesive national policy for teacher development existed at government level, a variety of qualification routes and types of qualifications of differing quality were made available across racially-segregated teacher education institutions.⁷

Differences in qualifications routes

By the early 1990s, matriculated students could obtain a four-year initial professional qualification. Provision was made in the *Criteria* for teachers who needed to upgrade from M+3 (Matric+3 years training) to M+4 mainly through a fourth year Higher Diploma in Education (HDE), or a 're-training' Further Diploma in Education (FDE).

However, before Standard 10/Matric (Grade 12) became the minimum entrance requirement at all colleges of education in South Africa in the 1980s, there were many black, mainly African and coloured, teachers in the field who had completed two or three years of professional training without Standard 10. These teachers mostly held Standard 7/8 (Grade 9/10) and two-year Primary or Secondary Teachers' Certificates (TC). After 1954, when junior primary schooling for African children was expanded to meet the labour requirements of the white population in apartheid South Africa (Unterhalter and Wolpe, 1991), the state had also introduced a three-year post Standard 6 (Grade 8) and post Standard 8 (Grade 10) TC (Christie and Collins, 1984).

Although provision in the *Criteria* document was made for teachers with Senior Certificate/Matric+2 years training to be trained to M+3, the *Criteria* were not developed for teachers who had not obtained a Matric/Std 10 (Grade 12). When qualification requirements were changed to M+3 and all teachers were required to upgrade their qualifications, there was thus no provision in the *Criteria* for teachers who had M+1 and less than Matric/Std 10 (Reeves, 1993, Reeves, 1997).

Technikons have now been re-named universities of technology.

Under apartheid, training institutions existed for each racially defined (African, coloured, Indian and white) group.

The verification process for the Western Cape supply and demand study reflected the circuitous routes that many teachers trained in education departments other than the former HoA, have taken in response to changing qualification requirements to reach equivalent qualification levels. For example,

- In the Department of Education and Training (African system), if teachers did not have a Senior Certificate/Matric there was no means for them to upgrade their qualifications until they had obtained their Senior Certificate. Teachers with a Standard 8⁸+2 years Teachers' Certificate (TC) who obtained Matric could then enter the M+2 year of a three-year Teachers' Diploma in Education (DE) and do a four-year part-time course in order to complete the remaining two years of a DE.
- House of Representatives (HoR), teachers from coloured colleges of education with Standard 8 and two years TC and a minimum of eight years' satisfactory experience were accepted as M+1. These teachers were allowed to enter the second year of the DE without a Matric/Senior Certificate.
- Some HoR teachers had a Standard 8+2 year TC followed by a specialist course in either an academic or practical subject. If these teachers did a practical specialist third year (for example, Physical Training), they were allowed to go into the third year of their DE. On the other hand, if they did an academic specialist course, they could only go into the second year of their DE.
- Although the M+1 level was the lowest qualification/admission requirement for in-service teachers to enter part-time courses, there were also in-service Department of Education and Training (DET) and 'homeland' teachers with Matric and no professional training. Teachers who had at least three years experience first had to obtain a one-year Teachers' Certificate (M+1) which then served as entrance to the DE. In order to qualify for a three-year DE, such teachers had to study for three years full-time or six years part-time. At the end of the process, they had a Matric, at least three years experience, a TC 1 and a DE 3.

Currently called Grade 10, but at the time Std 8 was a Junior Certificate (JC).

Such teachers served under 24 hours notice and received no benefits such as pensions, medical aid or housing subsidies.

• DET and HoR secondary teachers mostly obtained three-year Secondary Teachers' Diplomas (STD) from teacher training colleges. In some cases, these diploma qualifications were followed by a one-year full-time (or two-year part-time) BEd conversion to a degree. Thus some teachers have a 'conversion' BEd, but do not actually have a first university degree, although they may hold the same status as teachers who have first degrees. ¹⁰

Different types of institutions

Teachers in the current teaching force have also obtained their qualifications from a wide range of types of institutions, with variations in the programmes offered in the different types of institutions. They obtained qualifications from Colleges of Education, Universities;¹¹ Technikons; Vocational or Technical Colleges; and other private institutions (for example, theological colleges, nursing colleges, agricultural colleges, secretarial colleges, business colleges); as well as foreign institutions operating in and outside of South Africa.

Many of the institutions that offered teacher education during the apartheid era have either closed or have merged with other Higher Education Institutions, ¹² or have changed their names. However, prior to 1995, more than 100 statefunded Colleges of Education operated across the country. Colleges were mainly responsible for initial teacher education, especially the training of primary teachers.

Full-time and correspondence institutions in the various racially defined education departments ran upgrading courses for under-qualified teachers. Tuition on most upgrading courses was almost entirely by correspondence and students were provided with virtually no face-to-face contact (Reeves, 1993). Rural teachers mainly relied on distance learning universities like Vista and UNISA (University of South Africa), or on distance learning colleges of education such as Soshanguve, Roggebaai, Umlazi, Natal and Springfield to upgrade their qualifications.

What also causes confusion for teachers and makes it difficult to determine teachers' qualification status is that a one-year BEd degree (M+5), equivalent to an Honours degree, could be awarded after gaining a first degree.

Universities generally trained secondary school teachers.

Higher Education Institutions have been responsible for teacher education since 2001.

Distance education not only provided access for teachers who were geographically removed from institutions; it also meant that teachers could continue in their teaching post whilst they were studying. Indeed, in the early 1990s, Soshanguve College for Continuing INSET (In-service Education and Training) Education was established specifically to provide upgrading for inservice teachers who had Matric and at least three years teaching experience but no post-school qualifications (Reeves, 1993).

Variations in quality

During the 1960s, responsibility for planning and provision of training for many African teachers began to shift to the various education departments of the so-called TBVC (Transkei, Bophutatswana, Venda and Ciskei) and homeland¹³ authorities in support of the apartheid state's policies (NEPI, 1992).¹⁴ Because teachers in the TBVC and homelands had to teach syllabi at schools that were centrally prescribed by the DET, teacher training institutions in the TBVC and homelands mostly followed the formal curriculum and syllabi of the DET (Walker, 1991). In line with DET syllabi, a more limited curriculum tended to be offered at most colleges where African teachers received their training. The emphasis in these colleges was mainly on mastering high school content and classroom management skills rather than on enhancing conceptual and theoretical understanding (Carnoy, *et al.*, 2008).

Upgrading qualifications also served as a device for teachers to gain further categories for salary purposes and, most teachers were motivated to enrol for them mainly because they got salary recognition for their certificates (Hofmeyr and Hall, 1996). The emphasis in these programmes was on achieving equivalence of types of teacher qualifications through the accumulation of academic credits. The accent was on adding to the level of existing qualifications rather than on giving depth to teachers' previous areas of specialisations (Salmon and Woods, 1991). Further modifications such as the *ad hoc* introduction of new subjects meant that many in-service teachers studied subjects such as criminology, mercantile law or biblical studies which were either not school subjects, or were not relevant to what they were teaching or to their existing teaching posts (Reeves, 1993).

Apartheid homelands included Gazankulu, Venda, Lebowakgomo, Qwa Qwa, KaNgwane, KwaZulu, KwaNdebele and Venda.

According to Parker (2003), the number of teacher training colleges in the homelands peaked at about 120 in 1994.

Clearly, historic differences in the routes that older teachers have taken and the types of institutions where they obtained their academic and professional qualifications make equating teacher qualifications in terms their REQV status, or in terms of the highest qualification they have attained, difficult. The REQV system, which was essentially developed for evaluating teachers' qualifications for salary scale purposes, does not differentiate between or reflect teacher's specialised knowledge-base, that is, whether or not teachers are 'appropriately qualified' for teaching a specific learning area or subject in a particular school phase or grade. When it comes to the actual process of matching teachers' qualifications to their teaching posts in the current South African context, there are a number of factors that make the process difficult.

The challenge of matching teachers to posts

Under normal circumstances, difficulties in matching teachers to posts in schools (so that all teachers are specialists in the learning areas/subjects, and/or phases that they are expected to teach), arise out of timetabling issues, and/or limitations in staffing allocations, particularly in small schools with low staff ratios. Teachers may be allocated some teaching responsibilities that are only partially within their field of expertise and be required to teach areas or subjects at levels out of their field of expertise.

In South Africa, the fact that many in-service teachers were professionally trained for the old system makes it especially difficult to identify whether the school level of teachers' professional qualifications and the subject specialisations in their diplomas or degrees qualify them to teach a specific learning area or subject and phase level.

Curriculum and school system changes

In the past, teachers were trained as pre-primary (Grade R¹⁵ and below), junior primary (Sub A-Std 1/Grades 1–3), senior primary (Std 2-5/Grades 4–7), lower secondary (Std 6–8/ Grades 8–10), or secondary teachers (Std 6-10/Grades 8–12) rather than for the new school system's Foundation phase (Grades R–3), Intermediate phase (Grades 4–6), Senior phase (Grades 7–9), or Further Education and Training (FET) (Grades 10–12) levels. In addition, the

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subject specialisations that teachers obtained for the old system do not cover all the new areas of the school curriculum.

Some of the new system's Intermediate and Senior phase 'learning areas' integrate one or more of the subjects or areas that teachers studied in the past, into one learning area. Life Orientation covers Physical Education, Health Education, HIV/Aids Education, Religion Studies, and Career Guidance. Social Sciences incorporates History and Geography. Economic and Management Sciences incorporates Business Studies, Economics, Entrepreneurship and some Accountancy. Arts and Culture includes Art, Music, Dance and Drama. Teachers trained prior to the current curriculum changes have usually covered one or some but rarely all these subjects or areas in their qualifications.

Teachers who currently teach new more work-related FET (Grades 10–12) subjects such as Agricultural Management Practices, Tourism, Hospitality Studies, Engineering Graphics and Design, Information Technology, Computer Applications Technology and Civil, Electrical and Mechanical Technology could also have a fairly wide range of related subjects in their diplomas or degrees rather than these specific subjects. For example, teachers who are teaching Engineering, Graphics and Design may have studied Technology (in general), or they may have studied Technical or Engineering Drawing, or Design Technology.

To further illustrate the complexity of the current situation, some subjects that potentially relate to Social Sciences (besides 'Human and Social Sciences') have been clustered below on under five fields:

Table 1: Subjects that relate to Human and Social Sciences

History	Cultural Studies	Geography	Environmental Education	Human Rights Education
A frican history A frican studies Ancient history/ culture Archaeology Classical studies/ classical culture Economic history Historical studies Political science Political studies	Anthropology Ethnology Social anthro- pology	Astronomy Development studies Earth Sciences Earth-space science Geographical science Geographical studies Oceanography	Biodiversity Ecology Environmental science Environmental studies Marine ecology	Anti-racism education Citizenship and democracy studies Civics/civic responsibility Diversity studies Values and human rights

In addition, the piecemeal and non-linear sequence in which many of the current cohort of South African teachers obtained qualifications, and the resulting lack of internal coherence in school level and disciplinary specialisations, make it difficult to determine whether or not a teacher is fully qualified to teach a specific learning area/subject in a particular phase/grade. For example, some FET Mathematics and Physics teachers have one year of Mathematics or Science in a re-training Advanced Certificate in Education (ACE) but no Maths or Science specialisation in their initial three years of teacher training. Some high school teachers with general degrees have primary professional qualifications obtained in the form of a teaching certificate or diploma prior to their degree, but no secondary teaching qualifications.

The following are examples of questions that arose out of the process of trying to ascertain whether teachers' qualifications matched their posts in the Western Cape study:

- Is a teacher whose first teaching certificate was for junior primary teaching (Grades 1–3) but whose third year Diploma in Education upgrade (from a 2-year TC) was for senior primary (Grades 4–7), teaching, qualified to teach Grades 6 and 7? What about Grades 8 and 9?
- Is a senior primary trained teacher who has no Mathematics courses indicated in his/her qualification/s, qualified for teaching all learning areas in the Intermediate phase (Grades 4–6)?
- Is a teacher teaching Natural Sciences who has Biology as a subject in his/her qualifications but not Physical Science appropriately qualified?

- Is a Senior phase teacher who has Accountancy but no other dimensions of Economic and Management Sciences (EMS) appropriately qualified for teaching EMS?
- Is a secondary teacher who has Biblical Studies but not Psychology/Guidance and Counselling, Physical Education/Human Movement Studies appropriately qualified for teaching Life Orientation at Senior phase and FET level?
- Is a teacher who has Geography, or History, or Business Studies, appropriately qualified for teaching Tourism at the FET level?
- Is a teacher with a 'general' Technology specialisation appropriately qualified for teaching Mechanical Technology at FET level?

What became evident through the process of matching in-service teachers' qualifications with their teaching posts was the extent to which changing rules of qualification structures, the qualification histories of teachers, the current school system changes, together with the changing curriculum demands in South Africa, have 'fractured' the epistemological basis of teachers' professional identities. In the current South African context, historic factors together with changes in the schooling system and curriculum have also given rise to challenges in specifying criteria that can be applied for identifying whether the school level of teachers' professional qualifications and the subject specialisations in their diplomas or degrees qualify them to teach a specific learning area or subject and phase level.

Absence of official criteria

In the past, the national Department of Education (DoE) set specific subject and school level criteria which were used for determining whether teachers were qualified for teaching specific subjects and school levels. Although post-1994 DoE documents such as the *Norms and Standards for Educators* (1996, 2000) and the *Criteria for the Evaluation of Qualifications for Employment in Education* (2000) replaced previous documents, explicit requirements or criteria aligning old school level and subject specialisations with new learning areas and subjects and school levels to facilitate matching teachers to post are not available.

Clearly specifying appropriate subject lists for the teaching of integrated learning areas and more work-related subjects in policy documents is challenging in the present situation. What the situation alerts us to, is that 'messiness' arises if, or when, teachers' qualification requirements, the school system, and/or the curriculum, change. However, in the absence of specific criteria, it is extremely difficult to determine teachers' specialised knowledgebase, and whether or not teachers' school level and subject specialisations in their qualifications match the areas and/or subjects they teach.

It is not surprising thus, that the Western Cape supply and demand study found that principals and school leadership (who have the task of assigning teachers in the timetabling), and school governing bodies (SGBs) (who have the power to appoint people in SGB paid posts¹⁶ and to recommend teachers for employment by the provincial Education Department) do not always make the appropriate placements or use existing allocations effectively or efficiently. For example, teachers with subjects in short supply are not always teaching these learning areas/subjects in schools, and some teachers are expected to teach too many learning areas.

Up to now, we have outlined the complexities associated with matching teachers' qualifications to a decision as to whether or not they are qualified to teach particular subjects/learning areas or phases. We have established that upto-date criteria for teachers' specialised status, with specific requirements listing acceptable subjects that teachers should have for each learning area or subject, and for each of the school phases in the new school system, have yet to be developed. At present an acceptable REQV level is assumed to indicate that teachers' qualifications signify both subject knowledge and pedagogical knowledge teaching. As we have shown, to determine whether there is a match between a teacher's qualifications and a particular teaching post, other more specific criteria beside REQV status, or formal accreditation in the form or recognised degrees of diplomas, need to be applied.

The knowledge-base for teaching envisaged in current policy documents The 2000 Norms and Standards for Educators (DoE, 2000) specifies that teachers are expected to be equipped with foundational knowledge of the subjects or areas they teach, practical knowledge of how to teach their subjects or areas across school phases, as well as a reflexive competence. The latter implies the ability to exercise prudent judgement and the capacity and

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commitment to act responsively in different teaching situations and across contexts.

In the final sections of this paper we try to offer a way of thinking about key questions relating to specifying criteria for 'being qualified' in the current South African context. These include: What kind of specialised knowledge-base best provides older and newer teachers in South Africa with strong enough professional identities to develop the autonomy, and flexibility to (a) to meet the expectations of new forms of interdisciplinary knowledge effectively; (b) to effectively teach specialist school subjects; (c) to be effective across related school phases; (d) to be effective across different school contexts; and (e) to be effective in classes with learners at different levels and from different socio-economic and language backgrounds?

Debates about criteria for 'being qualified'

In terms of specifying and applying criteria for 'being qualified' for a particular teaching post, few people would argue that the knowledge-base required for teaching FET (Grades 10–12) level school subjects should not be disciplinary. However, because of the complexity of stipulating subject specialisation criteria for 'being qualified' to teach at GET (Grades 1–9) school levels by listing all possible acceptable subject specialisations for integrated learning areas, ¹⁷ the criterion for 'being qualified' generally applied at present, particularly at the Foundation (Grades 1–3) and Intermediate (Grades 4–6) phase level, is that teachers should have a 'more or less' matching phase level qualification.

The assumption is that a specific school level or phase qualification automatically indicates that a teacher is qualified to teach the curriculum at that particular level. However, in the Intermediate and Foundation phases, where teachers are generally required to teach one class all grade level learning areas, the wide range of subjects that relate to each of the integrated learning areas has made a strong disciplinary knowledge-base across the range of phase level learning areas that need to be covered virtually impossible. Even newly qualified teachers are highly unlikely to have developed expertise in all aspects of the phase learning areas.

Another view is that, at lower school levels, school or phase level qualifications should be the *main* criterion for designating or matching teachers to Foundation or Intermediate phase posts. The idea is that, as far as lower school levels are concerned, it is not problematic if criteria specific to the necessary disciplinary knowledge-base are not explicit in policy documents and/or are weakly applied in practice. The argument is that knowing *how to teach*, particularly at the Foundation phase level, but often also at the Intermediate and even the Senior phase level, is more important than knowing *what to teach*.

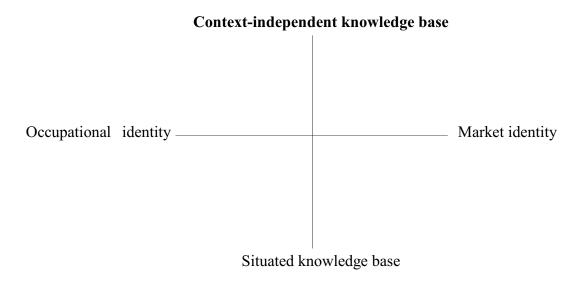
In the section that follows we try to offer a more theoretical approach to thinking about and understanding the link between a knowledge-base for teaching, teachers' professional identities, and criteria for 'being qualified' in South Africa.

A theoretical framework for thinking about criteria

Picking up on Moore's (2000, p.17) argument that "issues of knowledge entail issues of identity" so that "what we know affects who we are (or are perceived to be)" Gamble (2009) provides a more theoretical framework for thinking about "how different forms of knowledge relate to different modes of identity formation: (Gamble, 2009, p.61) and the relationship between the knowledge-base of teachers' work identity and its capacity for "work flexibility" (p.50).

Drawing on Gee's (2000-2001) and Bernstein's (2000) theorisation of identity formation, and on a Marxist interpretation of the social relations of work, Gamble (2009) offers a framework for thinking about modes of occupational identity that includes the following matrix for classifying contemporary workplace identity:

Figure 1: A matrix of identity positions in the workplace (Adapted from Gamble, 2009, p.62)



In this framework an 'occupational' or 'strong' work identity draws on "institutionalised identity resources that are underpinned by a stable collectively-held occupational knowledge-base" (Gamble, 2009, p.55). A 'market' or 'weak' work identity draws on a "relational knowledge-base dispersed across networks of social relations or affinity groups" and "is contingent on the market to which they relate" (Gamble, 2009, p.55). The framework's schema for the social relations of work starts on a continuum "with relations of autonomy over work at one end, moving to semi-autonomy and then, at the other end, to relations of partial or complete subordination" (p.56). The basis of autonomy over work (as opposed to relations under work subordination) is attached to professional status.

An 'occupational' identity under relations of autonomy over work rests on a knowledge-base that is fixed at a high level of specialisation which "is not the property of one individual but belongs to the occupation as a whole" (p.60). The professional knowledge-base of a 'market' identity under relations of work autonomy, is "portrayed as 'knowledge practice' which is fluid, dynamic, and provisional" (p.61), such as the case of the mobile identity of professionals who contract their services to different organisations and employers. Such professionals are positioned as "skilled boundary dancers, drawing lines and then dissolving them, playing with the identity shapes and knowledge positions that are taken up at different times with respect to the

system they enter. . .[so that] portfolio professionals learn to become distinct without becoming trapped in fixed distinctions" (Fenwick, 2007, p.244 in Gamble, 2009, p.58).

What is important for the purposes of thinking about criteria, is that, in this framework, the knowledge on which autonomous professional identities rest, is context-independent conceptual knowledge which "originates outside organisational boundaries" (Gamble, 2009, p.61). It is disciplinary knowledge which gives professionals "a way of working across contexts" (p.73). In contrast, work identities under relations of subordination rest on a procedural or 'situated' knowledge-base. For example, health club aerobics instructors under relations of subordination in a 'market' identity simply "perform an identity" (p.58) under a "proceduralised routine" (p.51) in "compliance with managerial prerogatives" (p.62). The identity is merely "branded to appear novel and unique" (p.61).

Discussion

The work identity of teachers who teach traditional school subjects at the FET level is more readily projected in policy documents in terms of an occupational identity that rests on a knowledge-base at a high level of subject specialisation. However, the integration of several disciplines in one learning area at the General Education and Training (GET) level suggests that the knowledge-base underpinning teachers' identities have been re-constituted, through curriculum changes.

The occupational identities of teachers of integrated learning areas now rest on a professional knowledge-base where they are expected to be "skilled boundary dancers" (Fenwick, 2007 in Gamble, 2009, p.58) who need to be familiar with a number of disciplines. By implication, teaching at the GET level (Grades 1–9), particularly at the Intermediate (Grades 4–6) and Senior (Grades 7–9) phase levels, is now even more demanding than it is for subject teachers at the FET level.

In the South African context, applying only phase or school level criteria could suggest that it does not matter whether teachers have specialisations in subjects such as Mathematics and language/s in their qualifications as long as they are qualified to teach a particular GET level. By implication, teachers' occupational identities could rest on a very weak disciplinary knowledge-base.

This situation applies both in the case of older and newer teachers, if the development of strong forms of disciplinary knowledge is not prioritised in their initial education and training. As we have seen, teachers trained prior to the current curriculum changes rarely have all the subjects related to integrated learning areas in their qualifications. But the integration of different disciplines into learning areas has also placed particular demands on current teacher education programmes because of limits in time that can be allocated to each discipline and in terms of how much disciplinary knowledge suffices – especially when students do not have existing foundational knowledge in their Grade 12 qualifications, and in the case of upgrading teachers, in their previous qualifications.¹⁸

If a school or phase level qualification is the only criterion for 'being qualified' and teachers' identities do not rest on a strong conceptual base, of concern is the dimension of their knowledge-base that gives "it a capacity to transcend the immediacy of local meaning" (Gamble 2009, p.73) and a way of working and teaching effectively across contexts. If the distinctive features of a particular form of pedagogy are to form the basis of teachers' identity, we argue that, without a strong disciplinary knowledge-base teachers, under relations of subordination in an occupational or a market identity, can only rely on a proceduralised or 'situated' knowledge-base and 'perform' an identity.

The situation is exacerbated by the fact that, in the South African context, many teachers' pedagogical knowledge-base has been transmitted through large-scale correspondence-based programmes with little or no face-to-face contact. Schools and classrooms are thus the main places where teachers have gained practical knowledge of teaching and their primary socialisation into the work of teaching. In South Africa many teachers' pedagogical identities rest on a situated knowledge-base that is constituted locally in communities of schools and classrooms where the whole of school life does not support the development of commitment and other capacities.

To address the changes in the national curriculum, teacher education institutions have had to re-curriculate their programmes. These curriculum changes have been introduced under pressure, as they were designed at the same time as most higher education institutions were undergoing intensive institutional restructuring and at the time when teacher diplomas needed to be upgraded to degrees (see Kruss, 2008; Kruss, 2009 for a detailed outline of these institutional, qualifications and curricular changes).

Carnoy, et al.'s (2008) study of a sample of Grade 6 Mathematics lessons in forty primary schools in Gauteng found that the type of teacher education institution attended 'mattered most' in terms of learner achievement.

All teachers, including those whose identities rest on a strong disciplinary knowledge-base, have internalised particular experiences or situated knowledge of schooling and teaching from their own school days. Most teachers tend to have practical knowledge of schools and teaching in schools that are similar to those which they attended or with students and staff from a similar background to their own. They find that they have to adapt to different school contexts, particularly where they are teaching learners from different socio-economic and language backgrounds from their own.

The policy of apartheid-based segregation in education intensified this tendency. In the post-1976 era, resistance to the state led to the majority of the black schools becoming sites for political struggle. The unstable schooling system not only compromised the culture of learning and teaching in schools, but in many cases led to the total collapse of teaching and learning, particularly in historically African schools. This legacy persists today to the extent that Soudien (2007, p.191) points to a large number of schools in the country that currently "operate only with the semblance of the conventional school... where the social rhythms and regimens of a learning environment operate weakly and often capriciously". Huge disparities continue to exist in contextual conditions, quality and functionality across school types in South Africa.

Although recent research in Gauteng (Carnoy, et al., 2008) has found that teachers appear to be more randomly distributed over schools than in the preapartheid racially-classified schools, the research also showed that African teachers still tended to teach in schools with mainly African students, Asian teachers with more Asian students, and white teachers with more white students or with African students from better-off families. Because of the years of disruption and resistance to apartheid in black schools and schooling, and because teachers tend to prefer to teach in schools that are similar to the ones with which they are familiar, many teachers' primary induction into schooling and teaching may comprise twelve or more years in contexts with long histories of dysfunctionality, where there is no institutional memory of how well-functioning schools work and no strong models of what successful teaching and learning really looks like.

What then can we learn from the above discussion about criteria for 'being qualified'?

What kind of criteria should be developed and applied in South Africa?

Whilst we agree that all teachers need disciplinary and pedagogical knowledge, as well as good work habits, we argue that what is important in relation to thinking about how criteria for 'being qualified' in policy documents constitute or re-constitute teachers' identities, is that the knowledge-base on which teachers' autonomous professional identity rests, should privilege context-independent conceptual knowledge. We hold the view that subject matter knowledge is key for teaching a particular subject or learning area and that disciplinary knowledge should be specified as a necessary pre-condition for teaching at all levels, because it is teachers' conceptual knowledge of school subjects which "originates outside organisational boundaries" (Gamble 2009, p.61), that forms the basis for giving teachers a way of teaching learning areas and subjects effectively across schools, grades, phases, and classrooms.

Hence, whilst we acknowledge that school or phase level qualifications should be included in criteria for 'being qualified' for specific teaching posts, we argue that all teachers need a strong foundation in the disciplines they are expected to cover in the curriculum. Even in the lowest school grades, teachers need a firm foundation in Mathematics, language/s and the disciplines that are integrated in life skills. The role of Foundation and Intermediate level teachers cannot be underestimated as it is extremely difficult for teachers at higher levels when learners' lack foundational understandings, knowledge and skills.

If learners lack a solid foundation in primary education, they can be doomed to a lifetime of disadvantage. Furthermore, because it is important that the curriculum is not delivered as a series of fragmented and disconnected components within and across each grade or phase, primary teachers also need broader knowledge beyond the grade/phase level that they teach. They need knowledge of the scope or trajectory of disciplinary knowledge across the whole of schooling (Reeves, 2005).

Conclusion

The Western Cape research highlighted some of the dilemmas associated with defining explicit criteria for 'being qualified' to teach particular subjects or

levels of schooling. In reality criteria that go beyond subject/phase level qualifications are also applied when teachers are selected for and appointed to posts. These criteria include language proficiency in the language of teaching and learning and/or the mother-tongue of learners at the school, depending on the school demographics and school's policy on multilingualism; experience, either in a particular type of school and/or teaching a specific subject/phase; socio-political criteria, for example a sense that a teacher of a particular background is more likely to 'fit in' to the school; and effectiveness, based on opinions of principals etc. or on results achieved.

Supply and demand studies reveal tensions around identifying explicit criteria for 'being qualified' for specific teaching posts because they sit at the interface between different sets of needs. They are expected to identify over-supply or shortages of teachers in fairly specific terms so that such over- or undersupply can be addressed. However, an analysis of supply and demand can only be as specific as the data available and the data will only be available if the necessary criteria can be made explicit. Studies cannot easily illustrate normative principles such as work ethic, values, attitudes, and dispositions, or reflexive competence, as well as other tacit criteria that may be used by selection bodies, except insofar as they can draw on qualitative data to report, for example, that principals complain that they can find teachers but can't find 'good enough' teachers for vacant posts (CHEC, 2008).

This paper has argued that the process of supplying information on whether there are sufficient appropriately and adequately qualified teachers for the system, is not a simple or mechanistic process of matching numbers. It has also shown how the fragmented and unequal history of teacher qualifications in South Africa has impacted on the epistemological basis of teachers' identities. Carnoy, *et al.*'s (2008) study in Gauteng showed that teachers with higher content and pedagogical knowledge are still teaching students of higher socio-economic background. Lingard (2007) argues that the poor levels of teacher knowledge in schools serving disadvantaged communities has social justice implications and reproduces inequality.

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Another question arising out of the data from the Western Cape supply and demand study is: How do the changing requirements for 'being qualified', where teachers are officially classified as qualified, but are later re-classified as 'being un- or under-qualified', together with changes in the school curriculum and system, impact on teachers' own sense of professional identity, motivation and commitment?

Chisholm (2009) points out that studies of supply and demand also need to recognise recruitment and employment factors such as teachers' conditions of work. Indeed conditions of work (such as poor school safety) and work contexts (such as small school size and distance from urban centres) also constrain selection criteria. The challenge, nevertheless, is to establish clear criteria for matching teachers to posts that are sensitive to the qualification histories of the current teaching force but at the same time contribute towards creating the best possible opportunities for learning across all school contexts.

Specifying the disciplinary knowledge-base teachers are expected to have for posts in policies dealing with teacher pre- and in-service and with teacher recruitment and promotion would contribute towards ensuring a stronger emphasis on the development and assessment of disciplinary knowledge in teacher education programmes. It would help to ensure that the selection of candidates for appointment in posts and promotion of teachers is based on an assessment of their disciplinary knowledge.

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Reasoning used by isiZulu-speaking children when answering science questions in English

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Abstract

Trend items used in successive TIMSS studies display markedly similar patterns of preference for alternative answers in most countries across all years in which each item was used. Used diagnostically, the patterns reveal common misconceptions, faulty reasoning processes, as well as answering patterns induced by the wording of the questions. South African children's responses are sometimes similar to those of other Anglophone countries, and sometimes markedly different. Low levels of proficiency in English could account for South African children's poor performance in successive TIMSS studies, but Zuma and Dempster (2008) showed that performance amongst a sample of isiZulu-speaking children was not significantly improved by translating test items into isiZulu. Textual strategies successfully explain unusual patterns of preference in multiple choice items which learners clearly do not understand (Dempster, 2007).

The order of preference for alternative answers were compared in three anglophone countries (Australia, New Zealand, England), a multilingual country that has English as medium of instruction (Singapore) and South Africa. Results showed that similar trends were present in some, but not all, questions, but in South Africa, the proportion of children selecting the correct answer was always much lower than other countries.

In order to explain the unusual patterns in South African children's responses to TIMSS questions, interviews were conducted with 36 Grade 9 children who were all first-language speakers of isiZulu. The children first wrote a science test consisting of eight multiple-choice and four free-response items drawn from the TIMSS released items, both in English and in isiZulu. They were interviewed in groups of four after completion of the test, and asked what they did to understand and answer science questions in English.

The results support work done by Probyn (2006) among isiXhosa-speaking children, which shows that Grade 8 children rely heavily on translation into the mother tongue to make sense of instructions, reading and writing in English. In addition, it was noticeable in this study that children had little prior experience of the content tested in the science items, and reported that they 'guessed' the answers. They described a variety of strategies for choosing an answer. When answering free response questions, children said they think of the answer in isiZulu, and then attempt to translate it into English. They concurred that being able to answer questions in their home language would be preferable.

Introduction

Detailed analysis of the patterns of preference in multiple choice questions used in TIMSS studies reveals strong consistency across countries and between years in the order of popularity of alternative answers. Trend items used in two or three successive TIMSS studies are particular useful for illustrating this phenomenon. The results suggest common reasoning processes used by different proportions of the population, the majority of whom reach the correct answer, but stable proportions of children are led to the other distractors.

South African children follow the pattern of other countries in some questions, but noticeably deviate from that pattern in many items. Far fewer South African children select the correct answer than in other countries, and the order of preference for incorrect answers is in many cases, different from that of other countries. This implies that South African children apply a unique set of strategies for answering the MCQ of TIMSS. For example, Dempster (2007) showed that in 20 multiple choice items, more than 40 per cent of South African learners selected one incorrect answer. The most popular choice could often be explained by textual strategies, such as eliminating answers that contained unfamiliar words, or selecting an answer that contained a word that appeared in the stem, thus leading children to the wrong answer.

The language of assessment, which is predominantly English, was found to be a major contributory factor to South African children's poor performance in TIMSS Mathematics questions (Howie, 2001). In TIMSS 2003, about 70 per cent of the 8 912 South African children who participated in the study were African children attending former African schools (n = 6 700 learners). Their average scaled score was 199 compared with 483 for children attending former White schools (n = 741 learners), where teachers have a high level of proficiency in English (Reddy, 2006). Analysis of South African learners' performance on 72 MCQ items in TIMSS 2003 revealed that readability factors, particularly sentence complexity (the number of words per Hunt's Tunit), adversely affected selection for the correct answer (Dempster and Reddy, 2007). The effect was more pronounced in children attending former African schools than in children attending former White, Indian and Coloured schools.

Previously, we have shown that it is possible to translate TIMSS questions into isiZulu without significant loss of meaning, but a sample of isiZulu-

speaking learners did not perform significantly better on the isiZulu version of the test than on the English version (Zuma and Dempster, 2008). Probyn (2006) obtained similar results with isiXhosa-speaking children in the Eastern Cape, where many learners told the researcher that they found it easier to answer questions written in isiXhosa, and when they were able to write in that language. Their free response answers were more detailed than their answers written in English, but overall scores did not improve significantly. Mgqwashu (2004) conducted a controlled experiment with high-school physics learners in Tanzania, and was unable to demonstrate any significant difference in learners' achievement in tests when they were taught and assessed in KiSwahili than in English. He attributed this finding to the fact that teachers teaching in KiSwahili were not using KiSwahili technical terms, but were using a basic non-technical register which did not give learners access to the concepts and technical vocabulary needed for the discourse of physics.

These studies point to a serious problem in the education of children in African countries, which involves the establishment of conceptual learning in the home language before a second language is introduced. Children acquire basic interpersonal communication skills in their home language, and are then faced with a transition to instruction in their second language at a critical time in their education, in the fourth and fifth years when conceptually dense subjects such as the sciences are introduced. At this stage in their schooling career, they have not yet developed cognitive academic language proficiency in either home language or English (Dalvit, Murray and Terzoli, 2009). Their teachers continue to code-switch, but assessment is conducted in English. Children are disadvantaged in assessment through their lack of language skills in English to comprehend and express themselves adequately in English, which compounds the disadvantage they experience through not having acquired cognitive academic language proficiency in either home language or English. Dalvit, Murray and Terzoli (2009) call for indigenous languages to become the languages of instruction and assessment, as allowed by the Constitution of the Republic of South Africa. Such efforts have not previously met with success because of public perception that English is the language of access to power and social mobility.

While the language of assessment undoubtedly plays a role in the performance of South African children in TIMSS, it does not eliminate poor teaching and learning of science concepts as a contributory factor to poor performance. Holliday and Holliday (2003) question the content validity of TIMSS, given that a common set of questions is compiled for a large number of countries

across the world. In TIMSS 2003, each country submitted a set of items, which were reviewed by a panel of experts tasked with compiling the final set of test items (Reddy, 2006). New items to be added to the existing item bank were piloted in most of the participating countries, including South Africa. Nevertheless, the overall content validity of science items in the final TIMSS 2003 science test was 49 per cent for South Africa as compared with an international average of 67 per cent. Distressingly, for items that were valid in terms of the curriculum, the average scaled score achieved by South African learners was only 22 per cent, compared with 19 per cent for all science items tested (Reddy, 2006).

Pollitt and Ahmed (2001) attempted to analyse students' reasoning through analysis of patterns of answering in TIMSS multiple choice items, and presented evidence that the validity of questions is compromised by the readability of question. They present evidence that focusing on the content words can disturb thinking patterns and lead children to select distracters. Their analysis is based on a 6-step model of question answering, which involves

- 1. learning the subject,
- 2. reading the question,
- 3. searching the memory,
- 4. matching question to memory,
- 5. generating an answer, and
- 6. writing the answer.

Pollitt and Ahmed (2001) postulate that question wording can activate irrelevant concepts in children's minds, leading them to the incorrect answer in the case of multiple choice questions, and that most errors arise during the reading phase of question answering. They point to content words that activate incorrect associations and lead to incorrect choices, which are supported by evidence from some TIMSS questions. A criticism of Pollitt and Ahmed's work is that they did not ask children to explain their reasoning processes, but constructed models based on analysis of answers.

This study investigates isiZulu-speaking children's reasoning process when they answer TIMSS science items in English, by interviewing the children after they had written a test composed of TIMSS trend items. It was hoped that the interviews would help explain the patterns of preference shown in the multiple choice items in successive TIMSS studies, and the cognitive

processing that led to understanding and answering free response items. It was also hoped that children would articulate challenges they face when confronted with science questions written in English, and their strategies for making sense of these questions.

Methods

The 12 TIMSS items selected in this study included eight multiple choice and four free response items from the Life Science items, because it is the content area most familiar to learners. The method used to translate TIMSS items into isiZulu is described elsewhere (Zuma and Dempster, 2008). Briefly, it involved translation of the item into isiZulu, and blind back-translation to check accuracy of the translation. Twelve isiZulu-speaking learners were randomly selected from the Grade 9 class at each of three monocultural schools, where the vast majority of learners and their teachers had isiZulu as their home language.

Learners wrote the test in English and in isiZulu, with half writing English first, followed by isiZulu, and the remaining half writing in the reverse order. After the test, learners were interviewed in groups of four, using a semi-structured format. A total of nine interviews were conducted, spread across the three schools. Code-switching was used during the interviews so that learners felt comfortable and were able to express themselves freely. The interviews were recorded, transcribed and translated into English for analysis.

Percentage choice for each alternative in multiple choice items used in this study were extracted from the International Almanacs database available on the TIMSS 2003 website. Since all MCQ items used in the present study were trend items, data were available for 1995, 1999 and 2003 for six items, and for 1999 and 2003 for two items. Australia, New Zealand, England and Singapore were selected for comparison with South Africa, since these four countries participated in all three TIMSS studies, and used English as the language of instruction and assessment. The percentage of all learners selecting each answer was averaged for Australia, New Zealand and England across the two or three years of use of the item. Singapore has English as the second language of most learners, who come from a diversity of language backgrounds, mostly Tamil, Malay and Mandarin. Despite the disadvantage of answering the test in English, Singapore has consistently been among the top-scoring countries in world. For South Africa, Singapore and the International Average, the

percentage was averaged across the years of use of the item. The International average is constructed from the responses of all countries participating in each study, and includes results from countries where the TIMSS questions were translated into another language.

Results

General themes emerging from interviews

When asked to describe the thinking processes they go through when attempting to answer a question, all but one of the children interviewed said they read the question several times and try to understand what it means. The interviewer then asked whether the children read it in the same language or whether they translate it into another language. For most of the questions, all the children said they translate it into isiZulu in order to clarify the meaning.

This is captured in the following responses:

I first read it and try to understand what the question is about and then translate it into isiZulu so as to explain it well.

I read the question and then think about it in isiZulu so that it can be clearer, trying to analyze it well in isiZulu, then I can choose the correct answer.

When you read the question for the first time you cannot clearly understand what it means, you will have to translate it into isiZulu to understand it more clearly, and then you read it in English again to understand what it requires so that you can think about the answer.

Three children said they would call the invigilator or the teacher to explain the question.

If I don't understand it, I will ask the teacher to explain it in isiZulu because I really don't understand it in English.

Some of the children from one school seemed to be able to understand some questions in English:

I understood it as it is in English, I did not translate it into isiZulu, and it is only the answer that I thought in isiZulu.

I understood it in English: I did not translate it into isiZulu.

In some items, the isiZulu version was more difficult to understand than the English version. For example, one learner gave this answer:

I did not understand the question in isiZulu test but I understood it better in the English test.

Once they had read and attempted to understand the question, the interviewer asked children how they chose their answer. Guessing was a common response, the reason being that the learners did not fully understand the question, or they had not learnt the subject matter before. Guessing was not an entirely random process, as illustrated with this answer:

When you guess, you look at whether the answer you are choosing fits in with the question, see if, when you pronounce it, fits in with the question.

Two different children described strategies of eliminating possible answers:

I chose A....because A is the only word I do not know and so I chose it. I know all these other words and how do they function.

I chose C because it is the only word I know and I did not understand what the question requires.

One learner described a strategy of looking for words in the answers that also occur in the stem:

When I have to guess, I first read the question for a couple of times and then when I realize that I cannot understand it, I then read the answers, if I also don't understand the answers, I look at a word, for example red blood cells, so where I see the word blood or red blood cells, I will choose that answer.

Children also commonly said that they thought about the answer in isiZulu, and then translated it into English to choose the correct answer. However, they expressed difficulties with the translation process, such as these:

There are difficult words in English which you sometimes don't understand and you will have to use a dictionary to get their meanings.

I had a problem when I had to select the answer: there were some words I did not know their meanings in the answers given here.

The problem was more acute when free response items were answered. Children repeatedly described thinking of the answer in isiZulu and then translating it into English.

I think about my answer in isiZulu but write it in English.

There is no difficulty when you write the answer in isiZulu because you can think quickly in isiZulu, but when you have to write in English, it gives some challenges since sometimes there are words that you know in isiZulu, but difficult to translate them back into English, and when you write the answer you change your sentence in isiZulu and end up writing what you were thinking in isiZulu, the sentence can be just away from what you wanted to say in the answer.

Lack of subject knowledge was mentioned many times by the learners. Learners rarely said that they understood a question and knew the correct answer.

I did not understand this question because I have never learnt about this thing before.

I have guessed from these words because I did not know any of them, I don't know them even in isiZulu.

I guessed because I could not understand this word 'abdomen'.

(Ten of the twelve children interviewed did not know the word abdomen, and one said a male does not have an abdomen.)

I did not understand the question, this word 'traits' gave me a problem. . . And then I ended up guessing the answer.

... I did not know that the red blood cells are, whether they are something in the body or something else, it has been really problematic in trying to understand it.

Explaining choices for particular questions

Selected items are shown in the next section, to illustrate the disparity in the selection patterns of South African learners compared with other Anglophone countries. Results show the form of the original question in English and its translation into isiZulu. The choices of children in previous TIMSS studies and for other countries are shown, together with the results obtained in the present investigation, where the same children answered the test in English and in isiZulu. Some specific comments made by isiZulu-speaking children about how they answered the question are then given. Items were selected to illustrate the variety of strategies that influence children's decisions in a science test of this nature.

Questions where South African children answered similarly to other countries

English version	isiZulu translation
A son can inherit traits	Indodana ingathola ufuzo
A only from his father	A kubaba wayo kuphela
B only from his mother	B kumama wayo kuphela
C from both his father and his mother	C kubo bobabili ubaba wayo kanye nomama wayo
D from either his father or his mother, but	D kubaba wayo noma kumama wayo, kodwa
not from both	hhayi kubona bobabili

Table 1: Average±SD percentage of learners selecting each option in TIMSS 1995, 1999 and 2003 in selected countries, and in the present study (n = 36 children). Columns are arranged in order of popularity, from most popular to least popular answer in all tables.

	С	D	A	В
TIMSS South Africa	50.1±1.6	21.0±1.3	12.9±2.1	11.8±1.0
Australia, New Zealand & England	77.9±8.4	10.9±3.9	8.4±3.6	2.1±1.1
Singapore	73.0±5.7	13.9±2.5	10.1±3.3	2.4±0.7
Intl. Ave.	78.4±2.1	13.7±1.0	4.9±0.8	1.7±0.3
Test sample English	64	22	8	6
Test sample isiZulu	47	25	25	3

Table 1 shows that answer C was the most popular in all countries, followed by D, A and finally B. South African children differed from children in other countries in that only 50 per cent chose the correct answer, and answers B and D were more popular than in other countries. The consistency of the pattern of preference is illustrated by the low standard deviations for each average.

In the isiZulu version of the test, fewer children answered correctly and answer A was more attractive than in English (Table 1). Despite the fact that teachers had not taught reproduction and heredity before the test, some learners indicated some knowledge of the principles of heredity in the interviews, e.g. "I think the answer is C because the child is made by both the father and the mother and then it can inherit the traits from both of them", and "I think the answer is C because sometimes there are children who resemble both their parents." One learner articulated the reason for the popularity of answer D "I will say it's D, because he cannot inherit the traits from both his parents, it's better to inherit from either his father or his mother, but not from both." Three children who chose answer B did not give a reason for choosing that answer. One learner indicated the anticipated lack of understanding of the word 'traits': "I did not understand the question, this word 'trait' gave a problem, it made it harder to understand what the question requires and then I ended up guessing the answer." However, it should be noted that the question can be answered by understanding the word 'inherit', but not the word 'traits'. The isiZulu word "ufuzo" carries the connotation of genetic inheritance, and here learners were led away from the correct answer in favour of particularly answer A (sons inherit from their fathers only). As already indicated, one child explained that it was easier to understand the question in the English form than the isiZulu form.

Whether children understand the question in terms of genetic inheritance or some other form of inheritance, the majority deem it most plausible that a son inherits from both father and mother, with the next most plausible answer being either father or mother, but not both. With answers involving only one parent, inheritance from the father was more plausible than inheritance from the mother. Translation into isiZulu decreased the selection of the correct answer, and increased the selection of inheritance from the father only.

Example 2

English version	isiZulu translation
What is the main function of red blood cells? A To fight diseases in the body B To carry oxygen to all parts of the body C To remove carbon monoxide from all parts of the body D To produce materials which cause the blood to clot.	Yimuphi umsebenzi omkhulu owenziwa ama-red blood cell? A ukulwa nezifo emzimbeni B ukuphatha i-oxygen iyiyise kuzozonke izicubu zomzimba C ukususa i-carbon monoxide ephuma kuzozonke izicubu zomzimba D ukukhiqiza izakhi ezenza ukuba igazi lome

Table 2: Average±SD percentage of learners selecting each option in TIMSS 1995, 1999 and 2003 in selected countries, and in the present study (n = 36 children).

Country	В	A	D	С
South Africa	34.2±0.5	27.3±1.0	22.9±2.5	11.8±0.1
Australia, England, New Zealand	75.0±5.9	15.5±3.1	5.5±2.3	3.4±1.1
Singapore	88.7±1.6	7.0±1.6	3.1±0.4	1.0±0.5
Intl. Ave.	61.6±1.7	18.0±1.0	14.0±0.4	4.4±0.6
Test sample English	22	25	33	19
Test sample isiZulu	31	33	22	14

Table 2 shows that in previous TIMSS studies in other countries and internationally, the correct answer was consistently the most popular choice, followed by answer A, and then D and C. South African children followed the same pattern, but with much less differentiation among alternative answers. The relative popularity of answer D among South African children can be explained by the fact that it contained the word 'blood', which is also in the stem, as confirmed by one of the children interviewed.

In the present study, the pattern of choice was not significantly different from random in both English and isiZulu versions of the test (χ^2 contingency test, p>0.05).

Six children told the interviewer that they did not know what "red blood cells are. . . have never heard of them before" and therefore they guessed the

answer. This key term in the stem was not translated into isiZulu, since teachers would normally use the English term when teaching blood. A misconception was clearly evident in interviews with the children. Children from two of the schools were convinced that red blood cells fight diseases in the body. One child said s/he had "learnt about red blood cells in Grade 8,... and so I know that these cells fight diseases in the body". All the children interviewed from the third school said they had never heard of red blood cells before, and they all guessed the answer. Children who attempted to translate 'red blood cells' into isiZulu gave 'amasosha omzimba' (soldiers of the body) as the translation. This is indicative of a misconception about the functions of red and white blood cells, which may account for 33 per cent of children choosing answer A in the isiZulu version, and 25 per cent in the English version of the test (Table 2).

The results confirmed that the misconception that red blood cells play a role in fighting disease is widespread, and could account for about 18 per cent of children internationally selecting answer A. The selection for answer D can be explained by a strategy of matching words in the stem and alternative answers. Very few children chose answer C, which involved the transport of carbon monoxide by red blood cells.

Questions where South African children displayed a different pattern of answering from other countries

Example 1

English version

A girl has an idea that green plants need sand	Intombazane inesu lok
in the soil for healthy growth. In order to test	zidinga isihlabathi em
her idea she uses two pots of plants. She sets	zikhule kahle. Ukuze
up one pot of plants as shown below.	isebenzisa izitshalo ez
Diagram	ezimbili. Yazilungisel
	yalezizitshalo njengob
Which ONE of the following should she use	ngezansi.
for the second pot of plants?	
Five diagrams	Yikuphi OKUKODW

isiZulu translation

Intombazane inesu lokuthi izitshalo eziluhlaza zidinga isihlabathi emhlabathini ukuze zikhule kahle. Ukuze ihlole isu layo isebenzisa izitshalo ezisemabhodweni ezimbili. Yazilungiselela eyodwa yalezizitshalo njengoba kukhonjiswe ngezansi.

Yikuphi OKUKODWA kwalokhu okulandelayo okumele ikusebenzise njengesitshalo sesibili?

Table 3: Average±SD percentage of learners selecting each option in TIMSS 1995, 1999 and 2003 in selected countries, and in the present study (n = 36 children).

Country	Е	В	A	D	С
South Africa	34.1±0.4	27.5±4.6	11.9±2.4	6.7±0.6	8.2±1.0
Australia, England, New Zealand	66.2±3.7	18.0±2.4	5.2±1.6	5.8±1.7	3.8±1.1
Singapore	74.0±3.0	12.1±5.4	7.6±2.5	4.2±0.0	1.9±0.1
Intl. Ave.	58.9±1.2	16.6±0.3	8.7±0.4	8.7±0.4	4.2±0.0
Test sample English	31	36	17	8	8
Test sample isiZulu	25	31	22	11	11

Although the correct answer E was consistently the most popular choice in other countries, it was only slightly more popular than answer B in South Africa. The strong visual image of the sun in the accompanying diagrams may explain the fact that answer B was the second-favourite choice in all countries reported here. Answer C was universally rejected as the least plausible answer, except in South Africa, where C was more popular than D. The fact that less than 60 per cent of children internationally were able to select the correct answer points to difficulties with the visual representation, but it could equally be explained by difficulties that many children may have with conceptualizing a fair test with several controlled variables and only one variable different in an experimental setup. Children from Singapore were markedly ahead of children from other countries in this item.

In the present study, children favoured the incorrect answer B, followed closely by the correct answer E. The isiZulu translation confused rather than assisted children to select the correct answer. This item relied on visual literacy as well as ability to read the text, and interviews revealed that children made a concerted effort to understand the concepts and experimental design. Children said they first read the question and then looked at the pictures at the bottom. An example of correct reasoning is shown here: ". . .in this plant she used sand, soil and water; so for the other plant that she wants to test – most of the plants come from soil and water – so, I chose E which has soil and water" A learner who chose answer A said "I chose A because plants need water and sand for healthy growth." One group of four learners interviewed had each chosen a different answer, and three said they guessed, while one,

who chose B, said it was "because the girl uses sand, soil and water". One learner revealed how the matching words strategy led him to choose answer D, "because here in the question it states soil and I saw that the picture, with the soil, to choose was in the option D".

The interviews confirmed that children had difficulty understanding the question, and guessing probably accounted for some of the pattern of answering.

Example 2

English version

A person sorted some animals into the two groups listed on the table Which characteristic of animals was used for the sorting?

Group 1	Group 2
Humans	Snakes
Dogs	Worms
Flies	Fish

- A. legs
- B. eyes
- C. nervous system
- D. skin

isiZulu translation

Umuntu wehlukanisa ezinye zezilwane ngamaqoqo amabili abhalwe kuleli-*table*. Yisiphi isici salezizilwane esasetshenziswa ekuzahlukaniseni?

Iqoqo 1	Iqoqo 2
Abantu	Izinyoka
Izinja	Ama-worms
Izimpukane	Izinhlanzi

- A. imilenze
- B. amehlo
- C. i-nervous system
- D. isikhumba

Table 4: Average±SD percentage of learners selecting each option in TIMSS 1995, 1999 and 2003 in selected countries, and in the present study (n = 36 children).

	A	С	D	В
South Africa	20.2±1.2	24.0±2.7	26.8±1.7	21.5±0.6
Australia, England, New Zealand	66.8±2.8	15.7±1.5	9.6±1.9	6.2±0.9
Singapore	61.7±2.8	21.0±2.1	13.6±0.7	3.4±0.2
Intl. Ave.	50.8±3.3	23.7±2.3	12.9±0.6	9.3±0.7
Test sample English	17	28	39	17
Test sample isiZulu	31	17	36	17

In the TIMSS studies, South African children showed little evidence of preference among the answers, although the answer D was slightly more popular than other answers. The order of popularity in other countries was answer A first, C second, D third and B the least-favoured answer. The percentage correct for Singapore and the international average was considerably lower than for the three Anglophone countries included here, indicating that this question favoured home-language English speakers.

The correct answer (A) attracted more children in the isiZulu version than the English version of the test, but in both versions, the incorrect answer D was the most popular. In the interviews, children said they did not know how to answer this question. They did not know whether to tick the box or select an answer from A, B, C or D. One learner offered the following translation "Yisiphi isilwane esingafani kulezi?" while another added "umuntu unhlanganisa izilwane kulama-group womabili, u-A no B". This translation helped this particular learner to understand what to do, but s/he chose answer B, because s/he said they all had different eyes. Several learners explained the popularity of answer D, saying that human skin is different from the skin of all other animals shown in the table. They clearly did not see that the organisms listed under one group shared a characteristic that separated them from all the organisms in the other group.

Some learners who chose the correct answer reasoned as follows: "I did not understand the question in English and so I tried it in isiZulu (meaning translating it) then I understood what was happening and chose the answer A...", "I chose A because all the animals in Group 1 have legs...", "Ja, it's A because the animals in Group 2 have no legs while those in Group 1 have the legs." These comments support the improvement in performance when the test was translated into isiZulu.

This question is based on the principle of classification, which is particularly important in Biology, since it underpins the Linnean classification system. It appears that worldwide, and in South Africa particularly, many children had not grasped the principle of a grouping characteristic. Translation into isiZulu provided clarity to some South African learners in this question.

Example 3

isiZulu translation **English version** Why would male insects be treated to Kungenziwa yini ukuba izinambuzane zesilisa zelashwe prevent sperm production? ukuze kuvikelwe ukuba zikhiqise amasperm? A to increase the number of female A ukuze kwandiswe inani lezinambuzane zesifazane B ukuze kuncishiswe isamba se-population insects B to reduce the total population of insects yezinambuzane C to produce new species of insects C ukuze kukhiqizwe i-species esisha sezinambuzane D to prevent insects from mating D ukuze kuvikelwe ukwandisana kwezinambuzane

Table 5: Average±SD percentage of learners selecting each option in TIMSS 1999 and 2003 in selected countries, and in the present study (n = 36 children).

Country	В	D	С	A
South Africa	20.5±0.3	25.3±1.5	21.2±1.6	26.8±3.4
Australia, New Zealand, England	66.2±3.1	18.0±1.0	8.8±2.5	6.0±1.7
Singapore	68.5±0.0	21.7±0.1	5.7±0.1	3.8±0.2
Intl. Ave.	46.1±0.5	27.2±0.3	13.7±0.1	10.8±0.4
Test sample English	33	25	19	22
Test sample isiZulu	44	36	6	14

In previous TIMSS, the selected countries consistently preferred B, followed by D, then C and A. South African children's pattern of choice shows that the least favourite answer in other countries (A) was the most popular, although there is little clear pattern of preference among South African children. The international average showed a clear trend towards D as a second favourite after B, supporting a misconception as the main reason for the popularity of D. The misconception used in choosing answer D is that preventing sperm production automatically prevents mating.

In the translation test, more children chose the correct answer in the isiZulu version than the English version of the test. Answer D was the second-favourite answer, especially in isiZulu, followed by A and then C. One learner explained that he translated the English question in order to understand it. His translation was: "Yinindaba izinambuzana zitreated ukupreventa i-sperm

production. . ." It is noticeable here that insects is translated (izinambuzana), together with why (yinindaba), but other key words remain in English with Zulu prefixes. Several children confirmed that they did not understand the word 'treated', and consequently they guessed the answer. One child argued that the correct answer was C, "because they want to prevent the old ones and produce the new species of insects". A reason given for choosing answer B was "because many people do not like insects, so they can treat them so as to reduce the total population of those insects". The phrase "to prevent sperm production" was not used in selecting an answer to this question. This is supported by the pattern of answering in isiZulu (Table 5), since more children selected answers A and D, indicating that translation enhanced children's understanding of this question.

Some learners reported a strategy of selecting an answer by matching words in an answer with a word in the stem question: "the question has the word 'production' and this answer here (pointing to C) has the word 'produce'". Although not indicated by the learner, similar reasoning could lead learners to select answer D, since the words 'to prevent' appear in the question and in answer D. The choice of D as second favourite is explained by faulty reasoning and/or the use of textual cues.

As was shown in the interviews, omitting the information about preventing sperm production makes answer A more attractive. Children who read and understand the whole question may actually be disadvantaged in this item. The reason for the popularity of answer A among South African children and in both languages was not articulated by children interviewed.

Example 4

English version	isiZulu translation
Which of the following organs is NOT situated in the abdomen? A liver B kidney C stomach D bladder E heart	Iyiphi kulama-organ alandelayo ENGATHOLAKALI kwi-abdomen? A isibindi B inso C isisu D isinye E inhliziyo

Test sample isiZulu (n=36)

Country Е D В \mathbf{C} Α South Africa 29.0±2.8 16.0±1.6 13.8 ± 0.8 17.3±1.6 19.0±2.1 Australia, New Zealand, 69.9 ± 3.7 16.4 ± 3.4 4.8 ± 0.8 5.1 ± 1.6 2.2 ± 0.5 England Singapore 72.7 ± 6.0 18.9 ± 4.4 3.0 ± 0.4 2.9 ± 0.8 2.0 ± 0.8 Intl. Ave. 66.1 ± 3.7 19.5 ± 2.4 5.6 ± 0.3 3.7 ± 0.4 2.8 ± 0.8 Test sample English (n=36) 36 25 14 11 14 28 25 25 8 14

Results for learners in present study, and average±SD percentage Table 6: of learners selecting each option in 1995, 1999 and 2003

Table 6 shows that the heart was the favourite answer in other countries, followed by bladder and then liver, kidney or stomach by a small percentage of the children. This indicates that children in these countries were certain about the location of the liver, kidney and stomach in the abdomen, but less clear about the location of the bladder.

South African children differed from other countries in that less than one-third selected the heart, and order of popularity after the correct answer was liver, stomach, bladder and then kidney. South African children were less clear than children in other countries about the location of liver, kidney and stomach in the abdomen. In the test sample, the order of popularity after the correct answer was consistent with other countries, in that the bladder was the secondfavourite answer after the heart.

In the English version of the test, more children chose the heart than the isiZulu version. The kidney was more plausible in isiZulu than in English, and more so than any other country. Several children reported that they translated the question into isiZulu: "Iyiphi i-organ ebhalwe la ngezansi engekho situated kwi-abdomen?" Three key words were not translated, and the translation lacks the precision of the expert translation. Many learners said they did not know the word 'abdomen', and they did not know where it is situated in the body. As a result, most children resorted to guessing. Guessing procedures include the following reported strategies: "...look at all the words given in the alternatives and know that some of these words will not fit in with the question (do not match the question), so do not look at those words any further but consider the other three possible ones, then guess from there".

This implies that a process of elimination is applied first, before random guessing is applied.

One learner described a mixed strategy of eliminating the most familiar words, and then looking further at the unfamiliar words. "I have left out the words stomach and heart because they will not fit in with this question and also I know these words, then look at the other three words: liver, kidney and bladder, but also I do not know the words liver and bladder and so I did not select them but I selected the word kidney because it sounded familiar."

isiZulu names exist for all the organs named in this item, and the translator used the correct terms for these organs, but learners performed worse in the isiZulu version than in the English version of the test. The key word *abdomen*, which could not be translated, proved to be the barrier in this item. Interviews thus confirm that South African children were uncertain about the location of organs in the body, and uncertain about the isiZulu names for the organs.

Free response items

Free response items are scored according to very specific assessment criteria provided with TIMSS documentation. The results obtained in other countries are of little relevance. In the translation test, children answered the English version in English, and the isiZulu version in isiZulu.

Example 1

English version	isiZulu translation
What is the advantage of having two ears to hear with rather than one ear?	Buyini ubuhle bokuba nezindlebe ezimbili ukuze uzwe kunokuba nendlebe eyodwa?

Credit for the correct response was given when learners made reference to locating the source of sound, hearing sounds from both sides, and retaining hearing if one ear does not function. Of the 36 children writing the tests, 14 per cent and 28 per cent answered correctly in the English and isiZulu versions respectively. When answering this question in English, learners said they translated it into isiZulu to understand it correctly, for example "Yibuphi ubuhle bokuba nezindlebe ezimbili kunokuba neyodwa ukuze uzwe kahle?" This translation is very close to the expert translation given in the isiZulu version of the test, with some changes in the word order. Children also used visualization techniques, as in the following example:

"I thought of a person, I have never seen a person with only one ear, so I thought that maybe someone with one ear only cannot hear very well." "I pictured a person with one ear and I thought it could be abnormal and that person cannot hear very well."

During the test sessions, it was interesting to see learners putting a hand over an ear as if simulating the experience of having one ear.

The answers written in isiZulu were better than those written in English, in that more learners located the position, direction and/or distance of the source of sound, and that if hearing is lost in one ear, the other may still function. Nevertheless, only 10 out of 36 learners were able to answer the question correctly in isiZulu, compared with 5 in English. Language interfered with learners' ability to answer this question, but that was compounded by lack of knowledge.

Example 2

English version	isiZulu translation
What processes take place in the human body that prevent it from overheating during exercise?	Yimaphi ama-process enzakalayo emzimbeni womuntu awuvikela ekubeni ungashisi ngokweqile lapho ezilolonga?

In order to get credit for this question, learners had to meet specific requirements with respect to combinations of cooling mechanisms and physiological processes that effect the cooling mechanism. Only 14 per cent of learners in the English version and 17 per cent in the isiZulu version of the test obtained credit for this question. Most learners did not refer to the cooling effect of evaporation, and many misconceptions and off-task answers were given.

Learners said they translated the English question into isiZulu to make sense of the question, and then visualized a person exercising. Several learners mentioned that "...he sweats, loses weight and gain more energy". One child said s/he understood the question better in the English test than in the isiZulu test. The emphasis on exercise in many answers indicates that the phrase 'that prevent it from overheating' was ignored, and learners answered in terms of the beneficial effects of exercise, e.g. "exercising is good for you, you feel good". There is also some indication that 'overheating' was understood as 'overeating', as indicated by these written answers: "eat healthy food, e.g. food with starch more vegetables and more water...need water...muscles get bigger... must have energy first and get proteins of the body".

Some learners said they did not understand the question in English or in isiZulu, and they had never met this at school before. They "did not understand how you can prevent overheating in the body when exercising".

Discussion

Taking Pollitt and Ahmed's (2001) model of question answering, the learners tested in this study had clearly not encountered most of the content assessed in TIMSS before. Therefore, the first step, learning the content, was not secure as they embarked on the test. Reading the question in English posed a second problem for the children, since they did not recognize some of the words in the questions. They added another step to the process: translating the question into isiZulu to make better sense of the question. The translation was sometimes incomplete as they encountered content words that they could not translate. Visualization was used when appropriate.

Following reading and translation, Pollitt and Ahmed (2001) insert several rapid, often simultaneous processes of searching the memory, matching question to memory, and generating an answer. In our study, the children were searching their memories, relying on general knowledge and successfully activating correct responses, as in the question related to inheritance, which is not taught in the school curriculum. However, where they are unable to activate correct responses, they used alternative strategies such as eliminating answers containing unfamiliar words, or matching words in the answer with words in the question. These are widespread and robust strategies, as shown by analysis of trend items in successive TIMSS studies.

In the South African context, children have limited experience of the content assessed in TIMSS, and therefore the first step of Pollitt and Ahmed's 6-step model is not always well-established. Reading the question is difficult for many children, due to their limited understanding of the language of assessment. Zuma (2006) proposed that two additional steps were added to Pollitt and Ahmed's (2001) model, involving translating the question into their home language in order to understand it better, and then translating the answer, which they generate in their home language, into English. The performance of South African learners on the free response items in TIMSS has been much worse than their performance on the multiple choice questions, indicating a poor ability to write answers in English.

When they were able to write the answer in isiZulu, the answers were more accurate and gave more information than the answers written in English. This is consistent with results obtained by Probyn (2005) with isiXhosa-speaking children in the Eastern Cape.

Despite the improvement in understanding questions that was apparent in some items translated into isiZulu, the overall score in isiZulu was not significantly better than the score for the English version (Zuma and Dempster, 2008). This indicates that South African children suffer an additional disadvantage over the language disadvantage; one of acquiring scientific concepts, either in English or isiZulu. This paper illustrates how far behind South African learners are relative to other Anglophone countries and Singapore. It illustrates that South African learners sometimes show the same order of preference for alternatives in MCQ items, but far fewer select the correct answer than other countries. Where a distractor is a second-favourite choice in other countries, it attracts many more South African learners than is the case in other countries. In some questions, South African learners display no pattern of preference, or they favour answers that are among the least popular in other countries. The analysis presented in this paper shows that misconceptions, use of textual strategies, guessing and misunderstanding the question contribute to the way children made choices.

The results presented here support the view that South African children in Grade 8 or 9 have not acquired cognitive academic language proficiency in either English or isiZulu, and adds further evidence of the disastrous state of science education in schools. It adds support to a growing movement in South Africa that proposes either a switch to mother-tongue instruction for a longer period of time (Heugh, 1999) or throughout schooling (Kwaa Prah, 2003), or improvement in teachers' ability to teach in bilingual contexts (Probyn, 2006). Probyn (2009) refers to the widening gap between the performance of children in township and rural schools and those in urban schools, where they are likely to be taught by English home-language teachers. Code-switching is likely to continue in schools where children and their teachers have low proficiency in English, but Probyn argues that current teacher education practice gives insufficient attention to the skills of teaching content subjects in bilingual contexts. She criticizes policy that does not take into account the reality of schools in which children and their teachers rarely hear English spoken outside school, and share a common language that is not English.

Dalvit, Murray and Terzoli (2009) conclude that "English can and definitely should be used in the education of African students in South Africa" (p.49).

However, they feel that the dominant role of English should be diminished, since it retards social transformation by perpetuating a language policy "designed to disempower speakers of an African language" (p.49). They argue that it would be more cost-effective to develop appropriate vocabulary for more subjects in African languages than to continue the current inefficient language practice. They end their paper with a call for new momentum for bilingual education in South Africa, which they regard as representing the reality of post-apartheid South Africa.

The present paper provides further evidence of the language disadvantage under which many South African learners approach assessment in English, but this is compounded by poor content knowledge, which is not compensated by offering tests in the home language. Providing bilingual education may assist children to understand science, but if the content is not being taught, there will be little improvement in performance in assessment tasks in home language or in English.

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Quality in teacher education: managing discursive change

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Abstract

The paper explores the terms *secularism*, *democracy*, *globalisation* and *quality* with particular reference to shaping learners' identities and ascribing quality to teacher education in two developing democracies: India and South Africa.

Key terms are interrogated in order to clarify how quality is subjected to current discursive pressures. The terms are seen as axiomatic to contemporary ideals of whole human development and citizenship. The nature of the contemporary self is explored in terms of Taylor's (2007) juxtaposition of pre- and post modern selves engaging with global discourse where expressivist and rational modes of argument compete for hegemony.

First, the paper deconstructs 'secular'; second, it examines tensions between hegemony and agency in the language of globalisation; third, it uses Bernstein's taxonomy of learners' rights and conditions to locate the democratisation of education in practice and finally, suggests how globalisation and democratic rights may impact on notions of quality in teacher education.

Introduction

The final report of the ministerial committee on a national education evaluation and development unit included the task "to review the international literature on similar school evaluation and development bodies in other countries" (South Africa, 2009, p.10). This article addresses two a priori issues emerging from a reading of the report that beg exploration:

- 1. The report draws heavily on experiences from countries where developmental contextual issues do not easily resonate with those in South Africa; and
- 2. The report references its need for reform in terms of a historical legacy and not in terms of contemporary pressures that might militate against shaping learners who "will act in the interests of a society based on respect for democracy, equality, human dignity, life and social

justice . . .who [are] confident and independent, literate, numerate, multiskilled, compassionate, with a respect for the environment and the ability to participate in society as a critical and active citizen" (Department of Education, 2002, p.3).

Given Bernstein's (1996) proposition that the school system at all levels – the 'pedagogical device' – is ultimately a struggle to shape learners' identities, this article suggests that there are contemporary vectors of pressure in discourse that must be acknowledged in the quest for quality. Furthermore, it suggests that engaging globally with interlocutors that struggle with similar challenges of diversity and development might be generative locally. India's cultural heterogeneity, colonial history, socio-economic crisis of wealth versus poverty, emergence into the global economy and language of learning and teaching dilemmas make it a particularly apposite discursive partner for South Africa. A more detailed comparison of challenges that social and economic conditions impose on education in these countries might be instructive for local researchers. Though compelling, given South Africa's problems with its culture of learning and teaching which can be seen essentially as deontological problems of identity, and global perceptions of its socio-economic place in relation to Brazil, Russia, India and China (the BRIC alliance) as perhaps a junior partner in a space designated 'emergent' and 'developing', such a study is beyond the scope of this article.

Recent education reform initiatives in India have been prefaced by a concept note (Ministry of Education, Kerala, 2008) that proposes that key terms acting as vectors of pressure in education discourse be interrogated, in order to clarify paradigms of quality and current discursive pressures on learners. The terms are:

- democratic
- secular
- global

These terms are seen in the concept note as axiomatic to contemporary ideals of whole human development and citizenship, which in turn, the concept note implies, are criteria for ascriptions of quality coming out of a reform process

Noting that the Indian state with the highest percentage of literacy, Kerala, "has not been able to strengthen a cohesive community life free from hatred, ill-will and alienation", the note envisages that

...a qualitative improvement of the human element has to grow and develop within the framework of a new value system emphasising the individuality and personality of the educated who are ready to accept the new challenges being thrown up by the on-going process of globalisation (Ministry of Education, 2008).

The Ministry's inference that a high literacy rate is not the only significant indicator of quality in a reformed system is furthermore evident in its emphasis on the 'individuality and personality of the educated'. The note therefore is explicit in linking the development of the 'educated' human self to ascriptions of quality – 'a qualitative improvement of the human element' – in the education system. Attention to improving 'the human element' must confront educators at policy and implementation levels with the nature of influences on the identity formation of students and novice teachers who emerge from education processes. This article represents a tentative engagement with a discourse of identity formation. It is not an empirical study or a detailed comparative analysis of education systems and conditions.

Firstly, in response to preliminary debates at the International Seminar on Secular and Democratic Education (Kerala, 2008) about proposed curriculum and teacher education reform initiatives in India that resonate with similar developments in South Africa (Table 1), this article explores concepts of secularism, democracy, globalisation and quality with particular reference to their implications for ascribing quality to teacher education practice. The comparative perspective offered by the concept note provides the departure point for a conceptual exploration of key terms.

Table 1: Comparison of reformed principles of curriculum developments in India and South Africa

Five principles of the National Curriculum Framework (NCF) 2005 India (Panniker, 2008)	National Curriculum Statement (NCS): Languages 2002 South Africa (DoE Pretoria, 2002)
Connecting knowledge to life outside school	Choose topics that are relevant to the learners' lives, and yet also move them beyond what they already know (p.8)
Ensuring that learning is shifted away from rote method	The [NCS] outcomes encourage a learner-centred and activity-based approach to education (p.1)
Enriching the curriculum to provide for overall development of children rather than textbook centric	The curriculum aims to develop the full potential of each learner as a citizen of a democratic South Africa (p.1)
Making examinations more flexible and integrated into classroom life	Continuous assessment is the chief method(p.127)[the] model encourages integration of assessment into teaching and the development of learners through ongoing feedback (p.134)
Nurturing an overriding identity informed by caring concerns within the democratic polity of the country	The curriculum seeks to create a lifelong learner who is confident and independent, literate, numerate, multi-skilled, compassionate, with a respect for the environment and the ability to participate in society as a critical and creative citizen (p.3)

Secondly, the article addresses broadly conceptual themes embedded in questions posed in the Kerala concept note. These themes should have remarkable salience in the South African education context, given that the phrase 'our new democracy' and wildly various conceptions of it in popular discourse, indicate that we are far from achieving a national 'common-sense' version of the concept. This situation should concern the policy makers who endorse a curriculum that asserts that it "aims to develop the full potential of each learner as a citizen [my emphasis] of a democratic South Africa" (Department of Education, 2002, p.1). The questions taken from the Kerala concept note are:

Conceptions of democracy are often expressed on popular platforms ubiquitous in the discourse of popular media, for example, the 'After eight debate' and evening open phone-in programmes on the South African Broadcasting Corporation's (SABC) radio SAFM station.

- What is the significance of democratic education?
- What is the relation between education and democracy?
- What are the nature and depth of social control of education?
- What is the relevance of education in a secular society?

The questions appear to have salience in South Africa because:

- Democratic education would be the antithesis of apartheid education and would therefore represent emancipation in the public's imagination;
- The future viability of South Africa's democracy depends on how it is lived by learners in the processes of their education;
- There is a history of deep alienation that must be healed between society and schooling, the effects of which persist in the present (Pampallis, 2007 in Hoppers, Gustavsson, Motala and Pampallis, 2007; Bloch, 2009),² and
- in recognition of the equal rights of diverse cultural communities to freedom of religion, the state has separated itself from official ties to a particular form of organised religion, preferring to inform learners about diverse religious practices rather than promote religious observances in the national curriculum, thereby defining itself as 'secular'.

In the Indian context, secularism has been interpreted as the evolution of a strategy to accommodate diversity and avoid sectarian violence through critical engagement in rational discourse. It has come to be seen as a social good, signifying tolerance and rationality in managing the heterodoxy of faith traditions that characterises Indian society (Sen, 2005, p.16). According to Sen, this version of secularism has roots in a long intellectual tradition of argumentation practised over millennia. Sen's version of secularism appears to be a realisation of the kind of secular state that is envisaged in South African policy when it asserts the primacy of the constitution over the exercise of religious rights:

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[&]quot;The situation inherited by the democratic, post-1994 government included negative aspects resulting from the actual struggle against apartheid. . . . The school-based struggle of the 1980s and early 1990s – characterised by school boycotts and a breakdown in discipline – resulted in a school culture in many, if not most, black schools which was inimical to organised learning and teaching" (Pampallis, 2007, p.34). See also Bloch, 2009 *The toxic mix* for a comprehensive description of present effects.

(2) The rights [to religious practices and associations] in subsection (1) may not be exercised in a manner inconsistent with any provision of the Bill of Rights (South Africa, 1996, p.15).

In the South African context however, secularism is often seen as a sign of loss of spirituality, a process of cultural alienation or as the inevitable outcome of consumerism. This notion of secularism approximates a 'western' interpretation of the term, different from its use in Indian intellectual discourse (Sen, 2005). The notion of 'secular' in the South African environment connotes a moral and spiritual challenge to a self vulnerable to discursive pressures coming from global market forces, not the means for an agentic self to construct a usefully neutral discursive space in which to conduct a rational argument. Therefore secularism experienced as an assault on the self, rather than as an enabling space, becomes a destabilising element in current discourse that pits religious or spiritual selves against secular selves and begs a closer look in order to trace its effects on learning identities. An example of the operation of this understanding of secularism in South Africa can be discerned in a small but growing home school movement³ that seeks to foreground the need for spiritual, not necessarily religious, values to be affirmed in children's education (Moore, 2002, p.5; Wits EPU, 2008, p.17). While a large proportion of the parents opting for home schooling are Christian, the movement is also representative of families for whom 'spiritual values' have non-Christian and even secular meanings.

In the paragraphs that follow,

- first, I deconstruct notions of 'secular' derived from Atlantic discourse in English;
- second, I examine tensions between notions of hegemony and agency in the language of globalisation, neo-liberalism and democracy;
- third, I use Bernstein's taxonomy of learners' rights and conditions for their realisation as a framework for locating the democratisation of education in practice; and

Moore (2002, p.3) reports that between 2 000 and 2 400 children were being home schooled in 1997. The Wits Education Policy Unit (2008, p.15) points out that establishing precise statistics of home schooling is difficult because parents are reluctant to register for home schooling, but cites current estimates of between 2 164 learners registered with provincial education departments and 15 000 estimated by Van Oostrum, the director of the Home School Legal Defence Association. Anecdotal evidence suggests that the movement is growing and that the issue deserves more research.

• finally, returning to the critical questions, I suggest how the discourses of globalisation and democratic rights may impact on notions of quality in the evaluation of teacher education programmes.

Deconstructing 'secular'

The discussion that follows links the concept of 'secular' to the development of the human self in order to clarify pressures in discourse that ultimately affect ascriptions of quality in the education system. The NCS (DoE Pretoria, 2002) is shot through with references to its intention to shape a particular kind of self embodied in learners' identities, which begs the question of how the system accounts for the realisation of this intention, because being able to describe the extent to which a system realises its stated intentions is surely the raison d'etre of quality assurance. Therefore, in order to discern quality outcomes with regard to the shaping of identities, explorations of notions of selfhood and their effects seem called for.

In a treatise on 'western' secularism, Charles Taylor (2007) juxtaposes notions of a pre-modern porous, communal, 'cosmic' self and a contemporary interiorized, individualised 'buffered' self. Taylor's treatise contributes to perspectives on historical and contemporary pressures on identity formation and ideology that ultimately shape education policy and practices.

The porous self inhabits an outer 'enchanted' world that is fast disappearing under globalising discursive pressures. This self is constructed by and owes its existence to the collective, which in turn is maintained by a consensus about external spiritual forces of destruction or sources of well-being that either threaten or sustain it: that is, forces of 'enchantment'. The porous self is vulnerable to invasion by cosmic forces that are ascribed to powers beyond human control: spirits, demons (Taylor, 2007). In an enchanted world, external sanctions imposed by the forces of enchantment govern moral accountability. These sanctions exert pressure through ritual, art, myth, and language, which are communal, not individual, resources. In pre-modern communities these communal resources take care of social cohesion and assure pro-social behaviour of individuals.

The 'buffered' self that is the creature of modernity and globalisation, is disengaged from the outside world by putting distance and a buffer, or boundary (the 'mind'), between itself and the influence of 'cosmic' forces.

Under conditions of modernity and globalisation in contemporary times, influences of enchanted worlds appear to be too localised, collective and cohesive to be discursively sustainable because globalisation breaks boundaries of time and place, disembeds and fragments knowledge⁴ and puts psychic, social, temporal and spatial distance between individual moral subjects and communal practices (Giddens, 1990).

A possible consequence of disembedding belief from local communities of practice in favour of aggregations of ideas encountered in global cyberspace is the reflexive interiorisation by individuals of a self-selected, fragmentary moral order. These individuals would carry various versions of the world with them, constructed in a continuous, reflexive discourse of adaptation with individuated self-regulatory moral codes and self-selected explanations for the outcomes of their choices. The individualised self lives in a version of the world constructed by its own internal reflexive adaptation to pressures that disenchant the outer world. This interiorised version of the world replaces the communal version affirmed by ritual and dogma, practices that represent 'enchantment'. Adaptation, a form of cognitive reflexivity, frees individuals from the imposition of external localised spiritual sanctions, or tradition, that might restrain their ability to act or move by personal choice.⁵

A way modern individuals can free themselves from 'spirits and demons' of enchantment is by applying critique and empirical knowledge – 'proof' – to demystify external pressures of the enchanted world. 'Evil spirits' become 'mental illness'. 'Enchantment' is explained away as an effect of the individual psyche (Taylor, 2007), not a communal experience. Individuals selectively appropriate elements of discourse, whether enchanted or pragmatic, for their explanatory power to interpret, construct and inhabit the individual image worlds they create for themselves.

It would be a mistake to suppose that Taylor's buffered self is an isolated

Smyth *et al.* (2000 in Hill, 2003) describe the process of appropriating bytes of incoming knowledge from global space as 'glocalisation'. This refers to the common sense reflexive use of traces of knowledge to perpetuate uninterrogated hegemonic assumptions.

Giddens (1990, p.109) describes the operation of secularisation: "Religious cosmology is supplanted by reflexively organised knowledge, governed by empirical observation and logical thought, and focussed upon material technology and socially applied codes. Religion and tradition were always closely linked, and the latter is even more thoroughly undermined than the former by the reflexivity of modern social life, which stands in direct opposition to it."

entity: in an earlier treatise his affirmation of the formative power of discursive interactions shows some affinity with social constructionist theorists:

I am a self only in relation to certain interlocutors: in one way in relation to those conversation partners who were essential to my achieving self-definition; in another in relation to those who are now crucial to my continuing grasp of languages of self-understanding – and of course, these classes may overlap. A self only exists within what I call 'webs of interlocution' (Taylor in Mulhall and Swift, 1992, p.111).

The 'buffered' self therefore, is constrained and shaped by social interaction to some extent. While nurturing personal agency becomes a prime objective of education, consensual norms that regulate social relations must inevitably emerge. Taylor hints at a relationship between ethics, cognition, critical reflection and self-actualisation in his proposition that "we are only selves insofar as we move in a certain space of questions, as we seek and find an orientation to the good" (Taylor, 1990, in Mulhall and Swift, 1992, p.110). An orientation to the good, by definition the common good defined by morally cognate questions, can only be achieved by developing critical reflective thinking in the school and teacher education curriculum, a cognitive activity different from common-sense reflexive thinking.

Recognition of the significance of reason in directing reflective learning behaviour is implicit in one of the learning outcomes of the home language curriculum in South Africa's National Curriculum Statement (NCS) (2002), namely, 'Thinking and reasoning.' In addition, 'reflective practice' is commonly presented as an ideal professional modality in curriculum planning for teacher education programmes. A distinction is rarely made in programme rationales however, between adaptive reflexivity that inevitably characterises human behaviour in globalised milieux, and deliberate critical reflective processes undertaken in an effort to interpret and understand the self in relation to other selves and social phenomena. Norms governing adaptive reflexivity tend to be transient expressions of a prevailing 'zeitgeist' that produces impulsive conformity to hegemonic forces, while the position of the critically reflective self is often characterised by resistance to dominant voices, and aspirations towards emancipation. This resistance can result from applying a lens of ethical principles in the gaze and arriving at a position that can be argued reasonably in terms of such principles. It is different from

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Zeitgeist: the defining spirit or mood of a particular period of history as shown by the ideas and beliefs of the time (Oxford Dictionary 2nd ed. 2003).

reflexive adaptation to a continuous stream of incoming information. Unlike reflective processes, reflexivity "actually subverts reason. . .We are abroad in a world which is thoroughly constituted through reflexively applied knowledge, but at the same time we can never be sure that any given element of that knowledge will not be revised" (Giddens, 1990, p.39).

On the other hand, in its uncritical conformity to zeitgeist, the adaptive reflexive self could be said to be vulnerable to its shifting 'spirits and demons' that are constructed by labelling and prejudice operating in expressions of uncritical common-sense social discourse.⁷

Taylor (2007) describes a shift from instrumental to expressivist reflexivity in Atlantic societies since the 1960s. This expressivist reflexive process generates belief in individual human beings' inner resources as the origin of 'authentic' creativity. The ideal is 'to be oneself' in order to self-actualise. Taylor sees this process as having generated a prevailing hegemonic philosophical ideal of 'authenticity' according to which what feels right for the individual subject is a moral good (Taylor, 2007). The trajectory of this proposition suggests that those enjoying hegemonic status may assume that the dispensation that feels right for them is right for everyone.

MacIntyre (in Mulhall and Swift, 1992) captures a similar theme in his term 'emotivism', but makes an important distinction between the meaning and the use of moral utterances by the 'emotivist self'. 'Emotivist' moral arguments are essentially manipulative in that an authoritative principled moral discourse inherited from the past is used to persuade others to alter their beliefs, not by means of a rational discussion based on impersonal criteria in the discourse, but by simply interpolating fragments of moral discourse into statements of one's own goals and values:

By collapsing the distinction between personal and impersonal reasons, emotivism removes the possibility of treating persons as ends, as rational beings capable of making an independent assessment of what they take to be right; no moral debate can be anything other than an attempt to treat one's interlocutor as a means towards one's own goal, namely that of aligning her feelings to ones' own (Mulhall and Swift, 1992).

For example, the common-sense label, 'human resources', connotes exploitable and expendable commodities rather than social beings looking for inclusion and opportunities to self-actualise through their work. The currency of the phrase, as part of the zeitgeist of the era, ensures that insecurity, rather than agency, defines the spirit of the workplace.

Emotivist discourse therefore represents a struggle for ascendancy between individuals. When the more powerful voice in a debate has brought its interlocutor into alignment with itself, 'common sense' is achieved between the parties in the debate. 'Common sense' does not necessarily mean that reason has prevailed in the debate, but that the power struggle has been resolved so that the interlocutor now subscribes to the assumptions carried in the terminology of the stronger voice. More widely applied, emotivist discourse represents contests between aspirant hegemonies in the body politic.

Emotivist discourse is not restricted to the level of the individual, but operates to cause social groupings to cohere and to justify the political goals of hegemonic forces. Dahlström and Lemma (2008)describe how emotivist discourse, in this case neo-liberalism that can be said to dominate the current zeitgeist of globalisation, operates at the level of hegemony:

The transformative character of neo-liberalism is played out through its invisibility. This invisibility creates an imaginary consensus that gives the impression that we are all talking the same language and that we in principle also want the same things to be accomplished. For example, who can question learner-centred education if by that we discursively mean that the learner is at the centre of education? This consensus gets under our skin as common sense and becomes taken for granted. When the consensus has entered the docile stage the road is open to reduce educational practices into technical formulae easy to measure and manage to create the desired efficiency and control.

Tensions between the language of hegemonic reflexive adaptation to contemporary global neo-liberal imperatives, particularly in management styles, and traces of the rhetoric of emancipatory pedagogy hegemonic in liberation milieux in the 1980s and early 1990s have found their way into curriculum policy in South Africa. These tensions cause incoherence in current education discourse. For example, under the heading 'A vision of emancipatory education', Robinson and Meerkotter assert: "In South Africa, as is the case in other countries around the world, oppression manifests itself at many different levels. These categories of oppression often take the form of gender, race and class discrimination based on particular cultural, religious, economic and political world-views. . .[it] becomes the responsibility of the educator to participate in overcoming these forms of oppression, some of which might, in a very real way, also be the struggle or struggles of educators themselves" (2003, p.448). These concerns are echoed in the NCS: "Issues such as poverty, inequality, race, gender, age, disability and challenges such as HIV/AIDS all influence the degree and way in which learners can participate in schooling. The Revised National Curriculum Statement Grades R-9 (Schools) adopts an inclusive approach by specifying the minimum

requirements for all learners" (2002, p.2). The notions of 'minimum requirements' and 'inclusivity' seem to be contradictory and the standardisation specified under 'Common Tasks for Assessment' (2002) militates against non-standard entrants, for example, 'over-age' learners, participating in schooling. While acknowledging forms of disadvantage, the wording of the NCS is careful not to commit to unconditional inclusivity.⁸

It is not difficult to imagine how emotivist discourse causes stress for the globalised buffered self who is reacting reflexively to competing hegemonic pressures. Personal agency to navigate dilemmas has become the most obviously desirable modality of post-modern global living, but the compass is not clear. Individuals can find themselves exhorted either to apply 'critical thinking' or to be their 'authentic' selves in pursuit of fulfilment. The truly critical thinker can expect to be lonely if the culture is emotivist because rational thought would tend to be counter-hegemonic in such an environment. Ironically, in performance management protocols, neo-liberal managerial language requires 'authentic' selves to define their 'own goals', set 'personal' targets, carry out 'self-evaluation' and engage in individuated 'reflexive' processes to improve 'performance' for personal 'reward', usually remunerative and therefore extrinsic. While the language of personal selfregulation seems to admit the subject's agency into managerial procedures, all these processes that appear to accommodate aspirations of 'authentic' selves however, are only legitimate if they promote hegemonic action in measurable ways, usually expressed as 'strategic objectives'.

There is also tension between the ideals of reason and of authenticity⁹ on a social level. Reason demands the application of rational critical argument based on 'universal' and ethical criteria to questions about value, while authenticity seeks solidarity with like-minded subjects. Reason subjects the

See also Randall (1993) 'People's education and "nation building" for a new South Africa'.

In describing the present 'age of authenticity', Taylor quotes Brooks' description of the US upper class as pursuing ". . .a higher selfishness. It's about making sure you get the most out of yourself, which means putting yourself in a job which is spiritually fulfilling, socially constructive, experientially diverse, emotionally enriching, self-esteem-boosting, perpetually challenging, and eternally edifying" (Taylor, 2007, p.477).

self to rules of logical argumentation; authenticity is essentially concerned with self-display. 10

Although the liberationist rhetoric of democracy may appear to create conditions in which modalities of reason and authenticity can co-exist, it will not resolve this particular tension, except perhaps to provide the means to delegitimise physical violence between the contestants, creating the potential for a safe space for participation in the contest. For Walzer (in Mulhall and Swift, 1992) democracy is not about 'truth' or reason but about participation in law-making, even if the law is made 'wrongly'. This view suggests that democracy can only provide a safe environment for discursive interaction; it will not necessarily guarantee emancipation or freedom to exercise personal agency. A remedy for threats to agency however, appears to be available in reasonable discourses of constitutionality and rights that protect subjects from hegemonies.

The tension between the claims of individual agency and hegemony is explored in the paragraphs that follow.

Tensions in the language of globalisation: hegemony and agency

The operation of emotivist argument can be seen to appear in rationales for policy. The manipulative, rather than rational, use of moral signifiers means that the will to power in hegemonic language that exerts the most pressure can invade and distort discourses of morality. For example, the language of hegemonic market discourse is conflated with the language of morality in the vision of the ultimate outcome of South Africa's National Curriculum Statement:

Taylor adds fashion to his three forms of horizontal social imaginary, namely, the economy, the public sphere, and the sovereign people, and describes how it operates to produce a sense of 'simultaneity' among people: "I wear my own kind of hat, but in doing so I am displaying my style to all of you, and in this, I am responding to your self-display, even as you will respond to mine. . . It matters to each one of us as we act that the others are there, as witness of what we are doing, and thus as co-determiners of the meaning of our action" (2007, p.481).

A prosperous, truly united, democratic and internationally competitive country with literate, creative and critical citizens leading productive, self-fulfilled lives in a country free of violence, discrimination and prejudice (South Africa, *Government Gazette*, 31 May 2002, No 23406, p.13).

Market values of prosperity, global competition, productivity and the individual's accountability to oneself are presented as the hallmarks of success in instantiating morally acceptable conditions based on principles of respect for personhood (freedom from violence), equality (freedom from discrimination) and dignity (freedom from prejudice). The language of morality has been appropriated to validate market goals (Hill, 2003), but no rational argument is offered to explain how prosperity, global competition, democracy, productivity and self-fulfilment eliminate violence, discrimination and prejudice.

The chief vector of market-driven morality is a globalising neoliberal discourse of free trade that promotes fiscal efficiency in the distribution of educational resources as a prime value. Strategic measures that result from this discourse include low public expenditure, cost-control rather than demand-led budgeting, privatisation, competition between education 'markets', decentralisation, deregulation to improve chances of profitability, increasingly differentiated provision of services [local and global], selective education, corporate-style managerialism, and a deregulated labour force, for example, short-term contracts and casualisation of teaching input. Globally, neoliberal policies favour untrammelled access to states to set up profitable education institutions. To achieve this access, international capital aims through mechanisms such as the World Trade Organisation's General Agreement on Trade in Services (GATS) to create a 'level playing field' between participating states, but in practice penalties and restrictions of access are not evenly applied to developed and developing economies (Hill, 2007).

The freedom that 'free trade' signifies is more apparent than real however, because it is restrained by a discourse of standardisation and bureaucratisation of education (Hill, 2003) that serves to produce a reliably measurable and mobile skilled global labour force. The specific needs of local contexts are unlikely to be prioritised unless they comply with the global educational norms measured in transnational benchmarking exercises. For example, the South African Schools Act (1996) makes it possible to exclude learners who are older than the age norms for their grades from the school system while making allowance for admitting underage learners. Age-norming in regular public schools has been tightened in spite of lack of progress in setting up age-

blind basic education institutions for learners who have fallen out of sync with norming practices, under-provision of vocational FET colleges especially in rural areas, the increasing number of AIDS orphans and households headed by children whose normal progress through the system is disrupted and the persistence of socio-economic conditions in which migrancy interrupts and delays progress through school.

When we consider the developmental challenges of diversity of every conceivable variation in South Africa, we can see that there are discrepancies between what we believe is desirable, namely, redress (South African Schools Act, 1996) and what we might actually achieve in education, namely, marginalisation of the most impoverished classes through standardisation of, for example, age and grade norms. While standardisation and uniformity tend to eliminate anomalies from the system in top-down processes, developmental approaches tend to be contextual, organic and target particular problems on the ground with unique remedies. This tension begs the question of whether bottom-up developmental imperatives are being overwhelmed by a standardising global hegemony or does the possibility of exercising localised agency to address diverse cases exist in this scenario?

Resistance in the discourse, rights and quality

While Althusser (in Phillips and Jørgensen, 2002) proposed that a dominant hegemonic ideological discourse overwhelms all alternative discourses to produce compliance, Fairclough draws on Gramsci to propose a definition of hegemony as the outcome of a process of negotiations of meaning that produces an evolving ideological consensus. According to Fairclough's view,

The existence of such competing elements [in the discourse] bears the seeds of resistance since elements that challenge the dominant meanings equip people with resources for resistance (in Phillips and Jørgensen, 2002, p.76).

Fairclough's analysis opens the discourse to the possibility of using discursive resources agentically to resist dominant voices: "individual creative acts cumulatively establish restructured orders of discourse" (Fairclough in Phillips and Jørgensen, 2002, p.17). A paradigm that has re-emerged in recent decades to challenge and resist the neo-liberal hegemony can be discerned in a burgeoning discourse of critical literacy.

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Critical literacy, like its antecedent critical pedagogy, legitimises its forms of activity in terms of a human rights discourse. Fundamental to its ethos is a commitment to the exercise of personal agency governed by critical attention to universal egalitarian ideals dominated by the principle of emancipation from hegemonic social control. Dozier, Johnston and Rogers (2006, p.12) explain the ideal of agency behind a critical literacy approach to teaching and the social impact to which it aspires:

We want our teachers to understand that through their teaching practice they can have an impact on others: students, teachers, schools, and society more generally. This is often referred to as agency: the idea that by acting thoughtfully, one may actually effect change (Johnston, 2004) . . . Agency can be viewed as essentially a personal narrative in which the self is a protagonist who confronts and solves problems, with associated motives and affect.

While the orientation of critical literacy approaches to human rights is generally recognized, the complexity of the human rights discourse itself gives rise to ideological battles over the distribution of resources and styles of governance, all of which argue their cases in terms of rights (Zafar (no date) in Hoppers, Gustavsson, Motala and Pampallis, 2007).

In 'announcing' his taxonomy of students' rights and conditions for their realisation, Basil Bernstein (1996) makes no apology for his failure to map the principled path that led to his formulation. Echoes of critical literacy and critical legal approaches however can be discerned in his model in its recognition of the student as situated in a set of inter-related discursive practices and subject to pressures in orders of discourse. Bernstein proposes that students' rights operate at three levels: individual, social and political. At the level of the individual, the student has a right to enhancement that is realised through a discourse of assessment practised as initiating the student across boundaries, not as gatekeeping. At a social level, students have a right to be included, but also to be autonomous. On a political level, students have a right to participate in procedures to do with governance. The conditions generated by these rights are described as confidence, communitas and civic discourse respectively. The purpose of the model is to provide a framework against which the distribution of rights in a school can be measured to see how equal or unequal it is. Bernstein claims that he has described conditions for an effective democracy and leaves it to the reader to deduce what he means by 'effective' from the elements of the model.

Conclusion: democracy, globalisation and quality

Teacher education programmes place education reform initiatives on different trajectories according to interpretations of the terminology of discourse, ideal models of practice that derive from these interpretations and most crucially from quality assurance and assessment practices in institutions. The critical questions in the Keralan concept note summarise the implications of the interpretations of key terms in the discussion so far:

• What is the significance of democratic education?

Democracy can only provide a safe environment for discursive interaction; it will not necessarily guarantee emancipation or freedom to exercise personal agency. The significance of democratic education for emancipation lies in rational discourses of constitutionality and rights that protect subjects from hegemonies.

• What is the relation between education and democracy?

Democracy will not determine what value stakeholders in education ascribe to its various processes, outcomes and actors or what kind of person emerges from the education process. Particular values endorsed by democratic processes can differ, depending on participants' qualities of reflection and values inherent in the modalities of education management. A national public education system may represent a reasoned consensus emerging from principled, critical, inclusive discursive negotiation at both policy and implementation levels of the system, or a display of hegemonic 'authenticity' that propagates uninterrogated mantras, for example, 'fit for purpose' and 'outcomes-based'. Left uninterrogated, these mantras operate on learning identities in ways similar to those of 'spirits' and 'demons'.

• What are the nature and depth of social control of education?

The nature and depth of social control depends on the impact of globalisation on local social cohesion.

In globalising conditions, local social control of education is dispersed. The learning individual constructs versions of coherence reflexively, a process often governed by hegemonic common-sense that is carried in virtual orders of discourse unconnected with local contexts and ideologies.

Globalisation is a powerful vector of hegemonic ideology. It fragments and disperses the situated coherence of local worlds, causing the individual to live reflexively to integrate disparate contacts, interactions across the limitations of time and space, disembedded images and messages and incoherent cultural exchanges into theories to live by. Theories could be rational and critical or expressivist and emotivist.

Paradoxically, an ideal secular democratic environment is dominated by the principle of emancipation from hegemonic social control while dependent on individuals' interiorising of universally applicable ethical standards of behaviour. Social control and the stewardship of the common good pass from authoritative communal exterior spiritual forces to interaction between individual citizens to create a consensus about values.

• What is the relevance of education in a secular society?

Personal agency is the defining characteristic of a secular person. This condition has inherent risks: the secular person's behaviour is not constrained by external 'spirits and demons' that protect the social cohesion of the community. Education in a secular society therefore, has to pay attention to the common good explicitly. Fundamental to its ethos is a commitment to developing personal agency governed by critical attention to the idea of universally applicable ethical ideals.

The fragmentation characteristic of the multi-modal globalised environment suggests that the achievement of personal agency in engaging in the quest for coherent meaning-making should be a key quality indicator in the system. Coherence would come from the integrative power of educators' and learners' personal interiorised critical principles to advance the common good. This implies that one of the most important tasks of curriculum reform would be to seek clarity on how to promote agency, reason, coherence, human rights and ethical dispositions in teaching and learning through evaluation and its rewards.

Just as the whole meaning of the pedagogical device is condensed in assessment practices (Bernstein, 1996), the whole meaning of an institution's education discourse is condensed and expressed in ascriptions of quality that play out in the deployment and distribution of resources and rewards.

Governance and quality assurance procedures shape the actual outcomes of teacher education programmes. Critical reflection on quality assurance protocols should reveal whether criteria derived from reflexive adaptation to hegemonic practices have become ends, or whether agentic learning, ethical participation in discourse and affirmation of human rights are likely to be definitive outcomes of teacher education institutions.

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Which teachers talk about sex? Psychosocial determinants of educator engagement with high school learners on HIV/AIDS and sexual practices

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Abstract

As a result of the call for educators to provide HIV prevention and education to learners, this study sought to investigate those individual and psycho-social factors associated with high educator-learner interactions around the subject of HIV and sexuality. This study found that younger educators and educators in lower job categories interacted with learners on issues relating to HIV and sexuality far more frequently than their older colleagues. Further, favourable educator-learner interactions were associated with factors such as: a good level of HIV/AIDS knowledge, personal experience with HIV/AIDS and low stigmatizing attitudes towards the disease. Whilst there is evidence of a high number of educator-learner interactions on issues related to HIV/AIDS and sexuality, of concern, is the perceived lack of HIV/AIDS educational and training support for educators by the Department of Education. Compounding this is the relatively high degree of sexual risk behavior reported amongst younger educators as compared to their older counterparts, which undermines their credibility as HIV prevention educators. These findings amplify the call for formal training to be provided to educators to ensure that they are equipped to adequately provide HIV education and sexual life skills training to the learners with whom they interact.

Introduction

In the past decade in South Africa, the role of educators and schools in the fight against HIV/AIDS has expanded. This shift has occurred in response to a number of policies that emphasised that school and educators are well situated to provide HIV prevention and education to learners (Hoadley, 2007; The World Bank, 2002). Whilst many educators recognize this role, many are still unwilling to address issues relating to HIV/AIDS and sexuality with their learners (Mannah, 2002; Wood and Webb, 2008). In spite of some educators'

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reluctance to interact with learners about these issues, research continues to highlight the desire of learners to receive HIV prevention and sex education through school-based programmes (Malambo, 2002; Mannah, 2002). In light of the above, this study sought to investigate the individual and psycho-social factors associated with educators interacting with learners on HIV/AIDS and sexual practice issues in South Africa.

In 1996, the National policy on HIV/AIDS for learners and educators in public schools in South Africa made HIV/AIDS education a mandatory component of the curriculum for learners (Department of Education, 1999). Hoadley (2007) has highlighted three further policy documents that have been instrumental in expanding the role of educators and schools in recent years, namely the Education White Paper 6 (Department of Health, 2001), the Implementation Plan for Tirisano, January 2000–December 2004 (Department of Education, 2003 in Hoadley, 2007), and the Norms and Standards for Educators (Department of Education, 2000). The Implementation Plan for Tirisano was responsible for making HIV/AIDS an important priority of the education system, whilst the Norms and Standards for Educators ensured that the role of educators in the fight against HIV/AIDS included a 'community, citizenship, and pastoral role' (Department of Education, 2000; Hoadley, 2007).

With the expansion of their mandate in recent years, schools have come to be known as nodes of care and support for children (Giese, Meintjes and Monson, 2005). Researchers have argued that schools must assume responsibility for equipping learners with the necessary knowledge, skills, and values that will decrease their likelihood of acquiring or transmitting HIV. HIV prevention education in schools is pivotal to overcoming the HIV/AIDS epidemic in South Africa. In Kelly's view (2004, p.39), "the only protection available to society lies with the social vaccine of education". A number of factors support the role of schools in this regard. Schools are able to reach approximately 12 million children on a daily basis and provide a place in which the well-being of children is monitored (Giese, et al., 2005). Schools can deliver HIV prevention efforts to an age group that is largely uninfected, but most at risk of contracting HIV (The World Bank, 2002). In South Africa, the 15 to 24-age group was found to have an HIV prevalence of 8.7% in a national survey conducted in 2008 (Human Sciences Research Council, 2009). The survey also reported that 8.5% of youth within this age group had engaged in sexual intercourse before reaching 15 years. In addition to the school setting, educators in many communities are highly regarded and influential members of whom many adults and children may seek advice

(Blair, 2001; Mannah, 2002). Accordingly, "educators are not only the mentors of academic life but of social life. They are the people who have values and can impart them" (Dube, 2001 cited in Blair, 2001, p.14). In spite of this, many educators have failed to uphold their responsibility as role models in recent years and have been accused of engaging in gross acts of misconduct with learners such as molestation (*Saturday Star*, 22 August 2009), sexual assault (Dimbaza, 5 August 2009), physical assault, and rape (*Star*, 28 August 2009).

Research on educators' knowledge and comfort in teaching learners about HIV/AIDS and sexuality has revealed mixed results. Studies have reported that educators lack adequate knowledge and the necessary skills to educate learners about these issues (Clarke, 2008; Mannah, 2002; McGinty and Mundy, 2008). Mannah (2002) has argued that many South African educators lack the emotional resources required to deal with these issues, and cope with low educator to learner ratios. Other studies conducted in sub-Saharan Africa and North America, however, have found a moderate to good level of HIV/AIDS knowledge amongst educators (Dawson, Chunis, Smith, and Carboni, 2001; Oshi and Nakalema, 2005; Peltzer and Promtussananon, 2003). Furthermore, the fact that learners are eager to receive information about HIV/AIDS and sexuality from them, reinforces the important role of educators (Jacob, Shaw, Morisky, Hite and Nsubuga, 2007; Malambo, 2002; Mannah, 2002).

Research has demonstrated that both personal and contextual factors can play a role in either undermining or facilitating effective educator-learners interactions about HIV/AIDS and sexuality. For instance, a lack of knowledge about HIV/AIDS and lack of training can make educators reluctant to engage in HIV/AIDS and sex education with their students (Kachingwe, Norr, Kapanda, Norr, Mbweza and Magai, 2005; Malambo, 2002; Mannah, 2002; Oshi and Nakalema, 2005). Educators are often reluctant to assume roles as 'prevention leaders' in their schools or communities because they themselves engage in risky sexual behaviour (Mannah, 2002; Oshi and Nakalema, 2005). Bhana (2008) has also drawn attention to the influence of the discourse of 'childhood innocence' and how this can regulate the way in which educators discuss information about sex with primary school children.

In contrast, research has shown that educators who are willing to share information about HIV/AIDS and sexuality with their learners are more likely to have good knowledge of HIV/AIDS, confidence in their ability to teach

about HIV/AIDS, and positive attitudes towards sex and moral issues (Lin and Wilson, 1998). Prior training and experience in teaching about HIV/AIDS and sexuality has been shown to be significantly associated with higher levels of instructional confidence and comfort in discussing such topics amongst Belizean educators (Lohmann, Tam, Hopman and Woebster, in press). Amongst educators in Mozambique, Visser (2004) found that educators of a younger age, who knew someone who was sick with or who had died of AIDS-related illnesses, who had a good knowledge of HIV/AIDS, who consistently used a condom in sexual interactions, and who had a high perception of their personal risk of contracting HIV, were more likely to have communicated about HIV/AIDS with their learners or fellow community members. Likewise, in a sample of high school educators in South Africa, factors such as previous training, self-efficacy, student centeredness, beliefs about controllability and the outcome of education, and personal responsibility were associated with having implemented HIV/AIDS education with learners. (Matthews, Boon, Flisher and Schaalma, 2006).

In light of the above, this study specifically addressed the concerns voiced by Peltzer and Promtussananon (2003) and Visser (2004) about the lack of research on the psycho-social factors associated with South African educators' interactions with learners in regard to HIV/AIDS and sexuality. More specifically, a cross sectional survey of knowledge, attitudes, sexual practices and sexual risk behaviour was conducted amongst educators in two Districts within the Orange Free State. Furthermore, as part of this survey, educators were questioned on their interactions with learners on issues relating to HIV/AIDS and sexual practices. The study hypothesized a significant relationship between psycho-social factors related to perceptions of AIDS and (a) personal risk of contracting HIV and (b) educators' perceived interactions with learners on these issues.

Methods

Participants

Two districts within the South African province of the Orange Free State took part in the study. There were 48 schools within the two districts of which 34 agreed to participate. These schools were evenly distributed in urban and periurban areas. Of the 1 214 educators representing the 34 schools, a total of

1 074¹ were present to participate in the study. A total of 843 questionnaires were completed and captured, which represented a response rate of 79%.

Measuring instruments

Participants were required to complete a questionnaire booklet that consisted of five sections. Two sections comprising psychometric scales that measured the relevant constructs of interest and three sections consisted of survey questions. Section one related to information regarding the socio-demographic characteristics of the sample. It included eight questions that elicited information about participants' age, gender, job category, population classification, experience as an educator, family structure, and living arrangements. The second section of survey questions collected information about the sexual history of the sample using 11 questions that inquired about past and present sexual interactions, sexual partners, condom use, knowledge of HIV status, and STI treatment.

The third group of survey questions inquired about sources of communication and information about HIV/AIDS, sexually transmitted infections (STIs), and TB. It consisted of eight questions with varying response formats. Participants were required to rank their sources of HIV/AIDS, TB, and STI information and indicate how frequently they communicated about HIV/AIDS with different groupings of individuals. The ease with which information about HIV/AIDS was obtained and spoken about was assessed using a four-point likert scale that ranged from 'very easy' (=1) to 'impossible' (=4). Two questions asked participants where they would 'most likely seek' and 'prefer to seek' medical care for HIV/AIDS, STIs, and TB, with responses including medical doctor, hospital, community clinic, and 'I don't know'. In addition to the above survey questions, participants were asked a further two questions that elicited information about their susceptibility to HIV infection in the future and their perceived risk of having AIDS at present. Response options were coded on a four-point likert scale that ranged from 'probably' (=4) to 'definitely not' (=1).

The five psychometric scales that were used in this study measured HIV/AIDS knowledge, educators' perceived interactions with learners, stigma, perceived susceptibility, perceived severity, and perceived efficacy.

Educators were absent at the time of the study as a result of illness, away on excursions or attending workshops.

Interactions with learners

This scale was designed to determine educators' interactions with learners on issues relating to HIV/AIDS and sexuality. Two questions assessed whether or not learners approached educators to discuss HIV/AIDS and sexuality and three questions elicited information about the level of comfort educators experienced in such discussions. Educators' willingness to teach a child who was either HIV positive themselves or who had an HIV positive parent was assessed with two other questions. Educators' perceived competence in assisting learners with sexual issues or issues related to HIV/AIDS was measured with three questions. The scale consisted of 10 questions to which participants could respond either 'yes' (=3), 'unsure' (=2), or 'no' (=1). The scale demonstrated an internal consistency figure of .71 in the study. Participants' responses achieved a mean value of 27.01 and a standard deviation of 3.40 (Min = 10, Max = 30).

Perceived susceptibility

This scale was used to assess participants' perceived susceptibility to contracting HIV. It was adapted from a scale developed by DeHart and Birkimer (1997). It consisted of three questions to which participants could respond on a four-point likert scale that ranged from 'strongly agree' (=4) to 'strongly disagree' (=1). The scale included questions such as, 'It is likely that I will get HIV', and 'I am at risk of getting HIV'. In the current study it demonstrated an internal consistency score of .71, with a mean value of 7.75 and a standard deviation of 2.28 (Min = 3, Max = 12).

HIV/AIDS knowledge

Participants' level of HIV/AIDS knowledge was assessed using 25 questions which included questions relating to HIV prevention, HIV transmission, HIV/AIDS treatment, and general HIV/AIDS knowledge. The response format ranged from 'agree' (=3) to 'disagree' (=1). The mean value for the scale was 63.39, with a standard deviation of 4.78 (Min = 25, Max = 75). This scale was developed by the researchers for the current study and demonstrated a low internal consistency value of .56.

Perceived efficacy

This scale consisted of seven items, three which assessed the perceived efficacy of condom use and abstinence in preventing HIV infection and four which measured the perceived self-efficacy of participants to reduce their risk of HIV infection. The scale was developed by the researchers and included statements such as, 'Using condoms is effective in preventing the AIDS virus', and 'I am able to abstain from sex to prevent getting the AIDS virus'. Response options were coded on a four-point likert scale that ranged from 'strongly agree' (=4) to 'strongly disagree' (=1). Responses to this scale achieved a mean value of 23.32 and a standard deviation of 4.78 (Min = 7, Max = 28). An internal consistency value of .73 was recorded for this scale.

Perceived severity

This scale measured participants' perceptions about the severity of the consequences of HIV/AIDS and STIs for themselves and the country. It was developed by the researchers for the current study. The scale consisted of three statements to which participants had to indicate their level of agreement. Response options ranged from 'strongly agree' (=4) to 'strongly disagree' (=1). Statements included, 'I believe that getting an STI is extremely harmful' and 'AIDS is a problem within our society'. A mean value of 3.48 and standard deviation of 1.68 were found amongst the sample (Min = 3, Max = 12). The scale demonstrated a moderate internal consistency figure of .61.

Stigma

The Stigma scale measured participants' level of stigmatising attitudes towards HIV positive people using nine questions to which participants could indicate their level of agreement on a four-point likert scale developed by the researchers. Response options ranged from 'strongly agree' (=1) to 'strongly disagree' (=4). The Stigma scale elicited information about participants' perceptions of whether HIV positive learners should be discriminated against, and whether they should be blamed for contracting HIV (e.g. 'A person with HIV deserves it'). Participants' responses achieved a mean value of 15.97, with a standard deviation of 4.24 (Min = 9, Max = 36). The scale demonstrated an internal consistency figure of .63.

Results

Demographic characteristics of sample

The majority of participants were between the ages of 31 and 50-years-old (78.9%). There was a relatively even split of males (45.6%) and females (54.4%) in the sample. Qualified educators comprised over half of the sample (63.9%), followed by heads of departments (11.2%), principals or deputy principals (8.3%), senior educators (7.1%), and student educators (2.7%). Student educators and qualified educators were significantly younger than senior educators, heads of department, principals and deputies, F(6, 817) = 14.34, P<.00. Most of the sample had more than three years experience as an educator (87.7%). Two thirds of participants had been employed at their current school for more than three years. The majority of participants were married with one spouse (60%), whom they lived with (53.4%). Nineteen percent of the sample were single and had never been married and 13.6% were either widowed or divorced/separated.

Demographic characteristics of sample Table 1:

Demographic variable	n	%
Age (years)		
<20	5	.6
21 – 30	72	8.6
31 – 40	368	44.0
41 – 50	292	34.9
51 – 60	84	10.0
60+	16	1.9
Gender		
Male	377	45.6
Female	451	54.4
Population class [±]		
Asian	1	.1
Black	802	96.4
Coloured	20	2.4
White	3	.6
Job category		
Student educator	22	2.7
Qualified educator	529	63.9
Senior educator	59	7.1
Head of department	93	11.2
Principal or deputy principal	69	8.3
Administrator	32	3.9
Other	24	2.9
Level of experience as an educator [±]		
Less than 1 year	28	3.6
More than 1 year but less than 3 years	62	8.0
Between 3 and 8 years	202	26.1
More than 8 years	477	61.6
Number of years at current school [±]		
Less than 1 year	111	13.7
More than 1 year but less than 3 years	142	17.5
Between 3 and 8 years	180	22.2
More than 8 years	376	46.4

[±] Missing values not reflected in the table

Sexual history of the sample

As illustrated in Table 2 the majority of participants reported that they had engaged in sexual intercourse (87.5%). In terms of the number of people with whom participants having had sexual intercourse with during their lives, the category 'five or more people' received the highest proportion of responses (32.9%). However, 32.1% of participants refused to answer this question, the majority being male (55.2%) and qualified educators (55.4%). The number of reported sexual partners significantly varied by gender, $\chi^2(4, N = 529) =$ 68.87, p<.001, and job category, $\chi^2(24, N = 530) = 58.38$, p<.001, with student educators reporting significantly more sexual partners (M = 3.19, SD = 1.81) than qualified educators (M = 2.43, SD = 1.17), senior educators (M = 2.55, SD = 1.36), heads of department (M = 2.51, SD = 1.28), and principals and deputies (M = 2.45, SD = 1.05), F(6, 790) = 2.40, p < .03. In the past three months, 56.8% of participants reported having had sex with only one person, in comparison to 14.2% who indicated more than two sexual partners. A significant proportion of participants chose not to answer this question (13.8%). The majority of participants (73.2%) indicated that their spouse or a long term partner was the person they had sexual intercourse within the last three months. Slightly over half of participants reported knowing their HIV status (53.3%), while 36.5% did not know their HIV status. Participant responses for this question varied significantly between educators from different job categories, $\chi^2(12, N = 800) = 32.44$, p<.01. Of the participants who chose not to reveal if they knew their HIV status (10.2%), 45% were qualified educators and 12.5% were senior educators. Qualified educators were also the largest proportion of educators who reported not knowing their HIV status (65.8%).

Sexual history characteristics of sample Table 2:

Questionnaire item	n	%
Have you ever had sexual intercourse?*		
Yes	725	87.5
No	24	2.9
I choose not to answer	72	8.7
During your life, with how many people have you had sexual		
intercourse?		
1 person	105	13.2
2 people	85	10.7
3 people	51	6.4
4 people	37	4.7
5 or more people	261	32.9
I choose not to answer	255	32.1
During the past 3 months, with how many people have you had sexual intercourse with? [±]		
None	116	14.3
1 person	461	56.8
2 people	76	9.4
3 or more people	39	4.8
I choose not to answer	112	13.8
With whom have you had sex with in the last 3 months? [±]		
Spouse	385	51.8
Long term partners	159	21.4
Sex worker	3	.4
Casual partner	42	5.7
Other	19	2.6
I choose not to answer	133	17.9
Do you know your HIV status?		
Yes	434	53.3
No	297	36.5
I choose not to answer	83	10.2
I have been treated for an STI infection during the past year.		
Yes	112	13.7
No	681	83.6
I choose not to answer	22	2.7
Before having sex I often:		
Consume alcohol	35	5.0
Take drugs	3	.5
Herbs	19	2.8

^{*} Missing values not reflected in the table

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Condom use practices amongst participants

Responses to the question, 'How often do you or your partner use a condom during sexual intercourse?' showed that 26.3% reported using a condom every time they had sex, whilst 32.2% never did so. Of the proportion of participants who chose not to answer this question, 51% were qualified educators and 11% were principals and deputy principals. Mean scores by job category indicated that student educators reported a lower level of condom use (M = 3.61, SD =1.50) compared to qualified educators (M = 2.97, SD = 1.40), senior educators (M = 2.79, SD = 1.70), heads of department (M = 3.01, SD = 1.32), principals and deputies (M = 2.81, SD = 1.70), and administrators (M = 3.03, SD = 1.70) 1.74), although this finding was not significant, F(6, 741) = 1.87, p < .08). Participants' responses to the question, "Whose decision was it to use a condom?" significantly varied by job category, $\chi^2(24, N = 735) = 49.75$, p < .01, with qualified educators being the largest proportion of educators who selected the option 'I choose not to respond' (54.5%). The proportion of participants who reported that condom use was their own decision (25.7%) was similar to the proportion who reported that it was a joint decision (26.8%), and the proportion who reported that they had never used a condom (22.7%). While 31.8% reported that they did use a condom the last time they had sexual intercourse, the majority of participants reported that they did not use a condom (54.0%). Responses to this question about condom use during last sexual encounter varied by job category, $\chi^2(18, N = 766) = 62.65$, p<.05 and age, $\chi^2(15, N = 771) = 26.93$, p<.05. Student educators were the job category that had the lowest proportion of participants who reported using a condom at last sexual encounter (10%), while 55% chose not to respond to this question. In terms of STIs, 13.7% of participants reported they had received treatment for an STI in the past 12 months. The proportion of educators receiving treatment for an STI in the past 12 months was slightly higher amongst qualified educators (14.8%).

Condom use practices amongst participants Table 3:

Questionnaire item	n	%	
How often do you or your partner use a condom during sexual intercourse? [±]			
Every time	200	26.3	
Almost every time	69	9.1	
Sometimes	142	18.7	
Never	245	32.2	
I choose not to answer	101	13.3	
Whose decision was it to use a condom? *			
Own decision	194	25.7	
Sexual partner	44	5.8	
Joint decision	202	26.8	
Never used a condom	171	22.7	
I choose not to answer	137	18.2	
The last time you had sexual intercourse, did you or your partner use a condom? *			
Yes	249	31.8	
No	422	54.0	
I choose not to answer	105	13.4	
Have you ever used a femidon?			
Yes	60	7.8	
No	611	79.2	
I choose not to answer	100	13.0	

^{*} Missing values not reflected in the table

HIV/AIDS, TB and STD related information

Table 4 indicates that the 79.7% of participants reported it very easy to obtain information about HIV/AIDS and 52.8% found it very easy to talk about HIV/AIDS. Bivariate analysis indicated that the majority (70.0%) of participants who found it very easy to discuss issues around HIV/AIDS also reported knowing someone who was HIV positive, $\chi^2(6, N = 792) = 15.33$, p<.05. Furthermore, the ease with which information about HIV/AIDS was discussed with others also varied across gender, $\chi^2(3, N = 805) = 9.54$, p<.05, and job category, $\chi^2(18, N = 805) = 33.90$, p<.05, with females (53.5%) and qualified educators (64.9%) the largest proportion of educators reporting this. In addition, the majority of participants reported knowing someone who is HIV positive (65.9%).

Table 4: HIV/AIDS, TB, and STD related information and health-seeking behaviour

Questionnaire item	n	%
How easy is it to get information on AIDS?		
Very easy	648	79.7
Quite easy	138	17.0
Quite difficult	21	2.6
Impossible	6	.7
How easy is it to talk about AIDS?		
Very easy	432	52.8
Quite easy	180	22.0
Quite difficult	176	21.5
Impossible	30	3.7
Where would you most likely seek medical care for AIDS, STDs, and/or TB? *		
Medical doctor	489	69.8
Hospital	49	7.0
Community clinic	120	17.1
Don't know	41	5.8
Where would you prefer to seek medical care for AIDS, STDs, and/or TB?		
Medical doctor	545	74.7
Hospital	69	9.5
Community clinic	89	12.2
Don't know	27	3.6
Have you ever required treatment for TB?*		
Yes	127	15.7
No	652	80.8
I choose not to answer	27	3.3
Do you know anyone with HIV?*		
Yes	531	65.9
No	166	20.6
I choose not to answer	106	13.2

^{*} Missing values not reflected in the table

Approximately three quarters of the sample (74.7%) either believed they would get HIV in the future or were uncertain of this. In response to the question, 'What are the chances I already have HIV?' thirty-three per cent believed they did not have HIV at present, with 35% unsure of this, whilst 13.3% believed that they probably were HIV positive.

Sources of information and interactions on HIV/AIDS

Table 5 provides information about the sources of HIV/AIDS information which participants utilised. Their primary source of information appeared to be TV (36.4%) followed by newspaper and magazines (21.9%), and health clinics (15.9%). Almost half of the sample (49.9%) talked about HIV/AIDS with their friends on a daily basis, which was followed by fellow workers (43.9%), learners (43.1%), and family members (40.6%).

Table 5: Sources of information on HIV/AIDS

Ranked sources of information on AIDS, TB and STDs±:	1st	2nd	3rd	4th	5th
Newspapers/magazines	33 (21.9%)	41 (27.7%)	19 (13.0%)	13 (9.5%)	12 (9.0%)
TV	55 (36.4%)	35 (23.6%)	30 (20.5%)	12 (8.8%)	6 (4.5%)
Health clinic	24 (25.9%)	27 (18.2%)	26 (17.8%)	18 (13.1%)	11 (8.3%)
Local doctor	8 (5.3%)	11 (7.4%)	17 (11.6%)	18 (13.1%)	14(10.5%)
School	9 (6.0%)	4 (2.7%)	19 (13.0%)	10 (7.3%)	12 (9.0%)
Radio	18 (11.9%)	18 (12.2%)	14 (9.6%)	36 (26.3%)	19 (14.3%)
Posters	4 (2.6%)	8 (5.4%)	13 (8.9%)	16(11.7%)	24(18.0%)
Friends	_	2 (1.4%)	4 (2.7%)	9 (6.6%)	22 (16.5%)
Family	_	-	1 (1.4%)	5 (3.6%)	3 (2.3%)
Colleagues	_	2 (1.4%)	2 (1.4%)	-	10 (7.5%)
None/do not receive information	_	_	_	_	_
With who, and how often, do you talk about AIDS?±	At least once a day	At least once a week	At least once a month	At least on one occasion	Never
Friends	26.8 (49.9%)	91 (16.9%)	86 (16.0%)	61 (11.4%)	31 (5.8%)
Family	201 (40.6%)	83 (16.8%)	70 (14.1%)	86 (17.4%)	55 (11.1%)
Fellow workers	205 (43.9%)	77 (16.5%)	68 (14.6%)	69 (14.8%)	48 (10.3%)
Learners	208 (43.1%)	79 (16.4%)	84 (17.4%)	66 (13.7%)	46 (9.5%)
Employees at an AIDS NGO	72 (20.3%)	34 (9.6%)	64 (18.0%)	71 (20.0%)	114 (32.1%)
My medical doctor	115 (27.4%)	38 (9.0%)	94 (22.4%)	92 (21.9%)	80 (19.0%)
Other	49 (27.4%)	22 (12.3%)	32 (17.9%)	29 (16.2%)	47 (26.3%)

[±] Missing values not reflected in the table

Psycho-social scales by gender, job category, treatment for STI and knowledge of HIV status

T-tests and one way ANOVAs were run between the five scales and variables such as gender, job category, treatment for STI, and knowledge of HIV status. Perceived efficacy scores were significantly higher amongst women (M = 23.65, SD = 3.38) in the sample in comparison to men (M = 22.91; SD = 3.10), t(734) = -3.10, p < .01. Females (M = 27.32, SD = 3.19) were also found to have higher scores than males (M = 26.68, SD = 3.62) on the Interactions with Learners scale, t(724) = -2.52, p < .05. Interactions with learners were more favourable amongst participants who found it very easy to obtain HIV/AIDS information (M = 27.22, SD = 3.30), as compared to those who found it quite difficult (M = 24.67, SD = 2.72), F(3, 721) = 4.813, p < .05, and higher amongst those who found it very easy to talk about HIV/AIDS (M = 27.47, SD = 3.25), as compared to those who found it quite easy to talk about HIV/AIDS (M = 26.53, SD= 3.50), F(3, 726) = 4.95, p<.05. Similarly, participants who reported knowing someone who was HIV positive (M = 27.45, SD = .13) achieved significantly higher scores on the Interactions with Learners scale in comparison to those participants who did not know someone who was HIV positive (M = 26.14, SD = 4.37), and those who chose not to answer (M = 25.63, SD = 3.70), F(2, 714) = 17.21, p < .01.

Correlations between psycho-social variables and selected demographics

Table 6 shows that interactions with learners on HIV and sexuality were found to be significantly correlated with all of the scales apart from Perceived Susceptibility. Educators with high scores on the Interactions with Learners scale were found to be in younger age groups, r = -.09, p < .05, and lower job categories, r = -.15, p < .001, and were likely to hold less stigmatising attitudes towards HIV positive people, r = -.13, p < .05. Having a good knowledge of HIV/AIDS, r = .16, p < .05, holding stronger beliefs about the severity of STDs and HIV/AIDS, r = .10, p < .05, and holding positive efficacy beliefs about condoms, abstinence, and personal ability to prevent HIV infection, r = .12, p < .05, were found to be statistically correlated with learner interactions.

Multiple regression analysis

A standard multiple regression analysis was run using Interactions with Learners as the dependent variable. The regression included three demographic variables, three sexual risk items, and the five psychometric scales. The tolerance values for each of these predictor variables were examined for the presence of mutlicollinearity and were found to be above the recommended level .10 (Pallant, 2005). The regression model was significant in accounting for the variance in interactions with learners F(11, 434) = 7.02, p < .001 and yielded an R² value of .15 (Adjusted R² = .13). Although this model was not a powerful predictor of participants' interactions with learners, it did, nevertheless, produce some significant findings. Six predictors were found to account for a statistically significant proportion of the variance in the dependent variable. A high level of HIV/AIDS knowledge was the strongest predictor of the interactions with learners, $\beta = .15$, t = 3.17, p < .01, followed by a low level of stigmatising attitudes, $\beta = -.13$, t = -2.81, p < .01, a high level of condom use, $\beta = -.12$, t = -2.64, p < .01, being a female, $\beta = .10$, t = 2.30, p < .05, younger age, $\beta = -.09$, t = -2.03, p < .05, and being in a lower job category, $\beta = -.09$, t = -1.94, p < .05.

Table 7: Results of the simultaneous regression for interactions with learners

	Coefficients				
	Beta (β)	t value	R ²	Adjusted R ²	Model Sig.
Model			.15	.13	.00
Predictor variables:					
Age	09*	-2.03			
Gender	.10*	2.30			
Job category	09*	-1.93			
Condom use frequency	10*	-1.86			
Knowledge of HIV status	70	-1.43			
STI treatment	.80	1.66			
HIV/AIDS knowledge	.15*	3.17			
Perceived susceptibility	.08	1.81			
Perceived severity	.05	.96			
Stigma	13*	-2.81			
Perceived efficacy	03	68			

Sig at p<.05.

Discussion

In terms of their sexual risk profile, a large proportion of the sample appeared to be engaging in relatively low risk sexual activities. The results indicated that only a small proportion of participants reported having had more than one sexual partner in the past three months (14.2%) and had engaged in sexual activity with casual partners (5.7%) or sex workers (0.4%) during this period. A substantial proportion of participants reported never or sporadically using condoms with their sexual partners (50.9%). This may be partially explained by the low prevalence of high risk activity in the sample, which is evidenced in the large proportion of participants who were married (60%), who have either not had a sexual partner (14.3%), or had only one sexual partner in the past three months (56.8%), and who reported having sex with their spouse or

^{**} Sig at p<.001. Dependent variable: Interactions with learners

long term partner in the past three months (73.2%). However, it must be noted that other factors beyond the focus of this study, such as gendered norms or self-efficacy, may be influencing the low rate of condom use amongst educators.

The findings suggest that there is a portion of educators who acknowledge the likelihood that they may be HIV positive at present, yet were engaging in high risk sexual behavior. Slightly under half of the sample (48.4%) believed they were either living with HIV or were unsure of this, and 72% of this proportion reported never using a condom during sexual intercourse. In light of this and the worrying finding that 36.5% of participants do not know their HIV status, it appears that a significant proportion of educators in the sample are placing themselves and their partners at risk of HIV infection. This lack of knowledge of HIV status is cause for concern given the role of educators as HIV/AIDS educators and role models for learners. Further, the fact that this was more prevalent amongst qualified educators (65.8%), who are oftentimes the individuals responsible for educating learners about HIV/AIDS, serves to detract from their credibility as 'prevention leaders' within their schools. The finding that 20.9% of participants feel highly susceptible to contracting HIV in their lifetime and 53.8% are uncertain as to whether they will eventually contract HIV, suggests that a proportion of the educators felt a sense of powerlessness in terms of their ability to protect themselves from contracting HIV in the future.

It was apparent that obtaining information and talking about HIV/AIDS were considered relatively easy tasks in this sample of educators. Female and qualified educators found it easier to talk about HIV/AIDS, which may have been facilitated by knowing someone who was infected with HIV. Seventy percent of this cohort found it very easy to talk about HIV/AIDS and also reported knowing someone with HIV. This is similar to the findings of Visser (2004). Thus it appears that knowing someone who is HIV positive may serve to diminish an educator's fear of talking about HIV/AIDS with learners (Mannah, 2002).

Consistent with this finding, participants who were less inclined to hold stigmatising attitudes towards HIV positive people reported more favourable interactions with learners, $\beta = -.13$, p < .05. Hence, one could infer that educators with low stigmatising attitudes may be perceived by learners as more approachable and open to discussion on HIV/AIDS. Overall, there was a relatively low level of stigma amongst participants, especially amongst

younger participants, r = .09, p < .05, and participants with fewer years of teaching experience, r = .09, p < .05. This is a pleasing finding as stigma has been identified as a significant barrier preventing educators from assuming roles as HIV prevention leaders in Malawi (Kachingwe, et al., 2005). Furthermore, it suggests that the younger generation of educators moving into the education system may hold less discriminatory attitudes towards HIV positive people.

Televisions and newspapers were cited as the most popular sources of information about HIV/AIDS, STIs and TB. This finding regarding the wide appeal of mass media because of its ease of accessibility is not surprising and has been recorded in other local studies (Goldstein, Usdin, Scheepers and Japhet, 2005; UNAIDS, 2005). However, the fact that large proportions of educators were identifying these media as their first, second, and third most important sources of HIV/AIDS information does suggest that educators are not receiving adequate formal HIV/AIDS and sexuality training through their schools or the Department of Education. An encouraging finding was the large proportion of participants (between 40% and 50%) that reported talking to family, friends, colleagues, and learners about HIV/AIDS on a daily basis. Because educators did not mention these individuals as important sources of information, this suggests that educators' social networks may serve more as a form of social support regarding daily issues or problems related to HIV/AIDS.

Overall, the educators in the sample reported being very comfortable discussing issues related to HIV/AIDS and sexuality with learners, and confident in their ability to address any issues or questions from learners in this regard. As expected, participants who found it very easy to talk about HIV/AIDS and to obtain HIV, AIDS, STI, or TB information were more likely to interact with learners about these topics. Hence, educators that were exposed to information about HIV/AIDS on a regular basis were more likely to feel comfortable in sharing this information with learners as they felt more competent and knowledgeable in this regard. This is supported by the significant correlation between Interactions with Learners and HIV/AIDS knowledge, r = .16, p < .05, as well as the results of the regression analysis that identified HIV/AIDS knowledge as a significant predictor of Interactions with Learners, $\beta = .15$, t = 3.17, p < .001. This finding affirms those of Visser (2004) and Lin and Wilson (1998) and further reinforces the importance and need for educators to receive ongoing, formal in-service training about HIV prevention and sex education.

Interactions with learners about HIV/AIDS and sexuality were also more likely amongst educators who reported practicing a high degree of condom use in sexual interactions, $\beta = -.12$, t = -2.64, p < .01. A similar finding was documented by Visser (2004) amongst Mozambiquen educators. Given that frequent condom use indicates that these educators are regularly engaging in health protective behaviours, this finding affirms the importance of educators' perceptions of themselves as positive role models. One could therefore argue that educators who feel that their lifestyle reinforces the education and prevention messages they communicate to their learners will be more willing and comfortable to engage with learners about HIV/AIDS. In contrast, studies have shown that educators who engaged in risky personal behaviours were reluctant to speak to learners about HIV/AIDS because they perceived themselves to be poor role models (Kachingwe, et al., 2005). However, this may have a wider degree of influence than the individual educators concerned. Recent media reports, for instance, about the sexual and physical abuse of learners by educators (Dimbaza, 5 August 2009; Otto, 6 August 2009; Saturday Star, 22 August 2009; Star, 28 August 2009) may serve to diminish the credibility of educators as role models and HIV prevention educators in the schools and communities in which these offences take place.

Favourable perceptions of educator-learner interactions were more likely amongst educators who believed in the efficacy of condoms and abstinence and in their personal ability to prevent HIV infection, r = .12, p < .05. Hence, educators who believed in the efficacy of condoms to prevent HIV infection were more likely to use condoms themselves and may in fact be more willing to educate learners about this prevention method. In addition, educators who believed in the severity of the HIV/AIDS epidemic and in the consequences of STIs reported higher levels of interactions with learners, r = .10, p < .05. Similar findings have been found by Matthews, *et al.*, (2006), where school-based HIV/AIDS programmes were more likely to be implemented by educators who felt personally responsible for learner outcomes and for providing critical HIV prevention information.

Three socio-demographic characteristics were identified as significant predictors of Perceived Interactions with Learners. Female educators reported more favourable interactions with learners about HIV/AIDS and sexuality, $\beta = .10$, t = 2.30, p < .05, which confirms the findings of other studies (Matthews, et al., 2006; Peltzer and Promtussananon, 2003). This may be attributed to prevalent gender stereotypes that emphasise women's role in caring for and nurturing children and which, perhaps, serve to diminish male educators'

sense of responsibility for providing essential information about HIV/AIDS to learners. The fact that male educators held less favourable perceptions of their interactions with learners suggests that male educators may not feel as comfortable and competent in engaging with learners about these issues. This finding with regard to male educators needs to be understood within the broader South African context of the so called 'crises' surrounding male sexuality (Walker, 2005).

A further interesting finding was that educators in younger age groups, r = - $.09, p < .05; \beta = -.09, t = -2.03, p < .05, and lower job categories, r = -.15, p < .01;$ $\beta = -.09$, t = -1.94, p < .05, reported better quality interactions with learners in regard to sexuality and HIV/AIDS. However, it should be noted that the younger and lower job category cohort also presented with a higher sexual risk profile. While we can be hopeful that the new generation of educators entering the education system are beginning to challenge the discourse of silence around sexual practice and HIV/AIDS, risky sexual identities may impede their role of HIV prevention and education agents in their schools.

Conclusion

This study identified significant individual and psycho-social factors that were associated with educators' interactions with learners about HIV/AIDS and sexual practice. Participants, in general, reported feeling comfortable and confident in their ability to communicate and assist learners with issues related to HIV/AIDS and sexual health matters. The findings suggest that this sample of educators were frequently communicating about HIV/AIDS with family, friends, colleagues, and learners. Favourable educator-learner interactions were associated with factors such as: the ease with which HIV/AIDS information was obtained and spoken about, a good level of HIV/AIDS knowledge, personal experience with HIV/AIDS, low stigmatising attitudes, positive efficacy beliefs, and beliefs about the severity of the HIV/AIDS epidemic.

The findings also suggest that younger educators and those in lower job categories may be more willing to engage with learners about issues related to HIV/AIDS and sexual practice than their older counterparts. Younger educators feel more comfortable and competent discussing such issues because they are part of the new generation of people who are more willing to talk about HIV/AIDS. They are also more likely to have been exposed to HIV prevention and education messages and interventions whilst growing up. Favourable educator-learner interactions were more prevalent amongst educators in lower job categories possibly due to the greater amount of time and closer proximity that classroom educators have with learners, which can facilitate more opportunities for discussion around HIV/AIDS and sexual health. Furthermore, the lower degree of stigmatizing attitudes found amongst younger educators may increase their comfort in talking about HIV/AIDS with their learners and may encourage learners to approach them with questions about such issues. These findings highlight that constructive interactions with learners about sensitive topics require a meaningful relationship to exist between the learner and educator. Whilst we understand the huge teaching responsibilities that classroom educators face on a daily basis, this study suggests that HIV/AIDS education and prevention may prove more effective if undertaken by classroom educators rather than Heads of Department, Principals, and deputies who have fewer interactions and less proximal relationships with learners. The central role of the class room educator should be borne in mind by schools that employ external agencies to conduct HIV/AIDS education and prevention programmes.

Despite these positive findings, an important caveat is that some student educators were engaged in high risk sexual behaviours that included multiple sexual partners in the past three months and a low degree of condom use, while a portion of qualified educators had been treated for an STI in the past year. In addition, the fact that some qualified educators were less forthcoming than other educators about information regarding their sexual history and condom use practices, and more likely to report not knowing their HIV status is a point of concern in this study. This suggests that this particular cohort of educators may feel uncomfortable about disclosing such sensitive information, which will most likely inhibit their role as effective HIV prevention and sex educators.

Given the above findings, the Department of Health and school governing bodies ought to provide pre-service and regular and ongoing in-service training designed to develop the capacity and skills of educators to implement school-based HIV prevention and education in their schools. This is supported by Kelly's sentiments (2004) regarding the importance of education in overcoming the HIV/AIDS epidemic and the apparent lack of formal training being afforded to educators. Consistent with Clarke's argument (2008), we also realize, that educators cannot be viewed solely as vehicles for the delivery of knowledge. We should therefore support promising partnerships between

schools, class room educators and external agencies involved in HIV/AIDS and sexuality education.

In terms of structural support, this study, therefore, highlights the need for South Africans to invest in educator development that includes formal training programmes for educators that extend beyond knowledge improvement to include efforts aimed at enhancing their personal development and HIV prevention skills. Meaningful interventions in this context should go beyond HIV/AIDS education and attempt to address risky sexual identities that are a consequence of the gendered nature of the AIDS epidemic. Teacher training institutions need to create spaces for teachers to critically reflect on how their personal and professional roles impact on learners' educational and social development. Educators are our ground troops in the education system, therefore, educator development interventions, should also address lifestyle and sexual health issues that serve to promote them as HIV education and prevention agents in their schools.

Training programmes should more specifically aim to increase educators' HIV/AIDS knowledge and self-efficacy for preventing HIV infection and address stigmatising attitudes towards HIV positive individuals. Effective training programmes need to help educators to become comfortable with discussing issues about HIV/AIDS and sexuality. Further, educators need to understand the severity of HIV infection as well as their responsibility for providing learners with crucial information to prevent HIV infection. The findings also suggest that encouraging personal interactions with HIV positive people may enhance educators' perceived ability and confidence in interacting with learners about HIV and AIDS. Lastly, and most importantly, training programmes should include strategic efforts to encourage and equip male educators to play an equally important role in HIV/AIDS education and prevention among learners.

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Understanding HIV/AIDS prevention programmes through the use of process evaluation

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Abstract

Through adopting a case-based approach, this research aims to illustrate the types of understanding that stand to be gained through the application of process evaluation. A model of process evaluation is developed which is tailored to address the specific challenges posed by HIV/AIDS as a topic for education. The model proposes a multi-layered approach to evaluation and incorporates three main categories: theoretical, pedagogical, and processual. Through considering the conceptualisation and implementation of programmes, the model illuminates aspects of an intervention programme that are often overlooked in the dominant modes of evaluation.

Introduction

With a national prevalence rate of almost 30 per cent (Department of Health, 2007b), there are more people living with HIV/AIDS in South Africa than any other country in the world (Abdool Karim; Abdool Karim, and Baxter, 2005). Thus, more than twenty years after its discovery, the virus continues to ravage communities and undo decades of development gains (Piot, Bartos, Ghys, Walker, and Schwartlander, 2001). Given that so much weight is placed on education as a means of prevention, it is imperative to have a thorough understanding of HIV/AIDS prevention programmes and of the factors that contribute to their success or failure.

HIV/AIDS is a complex social problem, an epidemic shaped by numerous individual, community, and macro-level forces (Campbell, 2003; Eaton, Flischer, and Aaro, 2003; Nattrass, 2004). It constitutes a sensitive topic for education due to its connection with issues of life, death, sex, and sexuality.

Of interest in this paper is the evaluation of HIV/AIDS intervention programmes. The authors note that the majority of evaluations, summative in nature, focus primarily on impact, and tend to compare outcome-level

variables, such as reported condom use and HIV-related knowledge, before and after the intervention (see Campbell, 2003; Scott, 1992). Such evaluations produce "descriptions of outcomes rather than explanations of why programmes work (or fail)" (Pawson and Tilley, 1997, p.30). So while outcome-focused evaluations have the potential to demonstrate the effectiveness of a programme, they neglect what happens during interventions and thus offer little insight as to how any given effects have been produced (Aggleton and Moody, 1992). For example, summative evaluations have revealed that information-based interventions have indeed been largely unsuccessful at effecting behaviour change (Campbell, 2003; Campbell and Mzaidume, 2002; Selicow, 2005; Varga, 2001), but do not offer explanations as to why they have been ineffective. In focusing primarily on impact and overlooking the processes through which any given outcomes have been achieved, many evaluations of HIV/AIDS intervention programmes are failing to respond to the complexity of the epidemic.

It would appear that evaluations which focus purely on outcomes are only answering to part of the problem. This gap in understanding points to the need for different kinds of questions to be asked, particularly given that the success or failure of an HIV/AIDS intervention programme can have implications for life or death. It is proposed here that the evaluation of HIV/AIDS prevention programmes requires a more holistic approach whereby more comprehensive, complex, questions are asked.

This paper draws on a case-based study that sought to examine the utility of process evaluation in an HIV/AIDS intervention programme, and illustrates the types of understanding that can be gained through such an evaluation. In response to the question: 'What contribution can process evaluation make to our understanding of HIV/AIDS intervention programmes?' The paper offers insight into how process evaluation, as an analytical tool, generates insights that other, more common, forms of evaluation are unable to provide. A model for process evaluation is developed which sheds light on the conceptualisation and implementation of HIV/AIDS intervention programmes and, we argue, may contribute to the development of more appropriate, comprehensive, and effective HIV/AIDS interventions.

Understanding HIV/AIDS evaluation processes

Different types of evaluation are applied to programmes in general and

HIV/AIDS intervention programmes in particular. Posavac and Carey (2007) identify four: evaluation of need, evaluation of process, evaluation of outcome (or summative evaluation) and evaluation of efficiency. Of consequence for this paper is an understanding of process evaluation or "programme monitoring" which is said to produce "a natural history of a project" (Scott, 1992, p.66). It is defined by the World Health Organisation (Roberts, 1998) as "the continuous oversight of an activity to assist in its supervision and to see that it proceeds according to plan" (Roberts, 1998). It is "the task of documenting the extent to which implementation has taken place, the nature of the people being served, and the degree to which the programme operates as expected" (Posavac and Carey, 2007, p.7).

An evaluation which overlooks the processes through which any given outcomes have been achieved has aptly been described as representing a 'black box' approach to programme evaluation (McLaughlin, 1987, cited in Harachi, Abbot, Catalano, Haggerty, and Fleming, 1999). Put simply, it does not seem logical to expend time and effort analysing the impact of an intervention without first gaining an in-depth understanding of its delivery, and of precisely how any positive outcomes can be reproduced (Plummer, Wight, Obasi, Wamoyi, Mshana, Todd, Mazige, Makokha, Hayes and Ross, 2007; Scott, 1992). The approach can produce valuable feedback and understanding on the running of a programme, allowing for any problems to be noticed as and when they occur. It also has the potential to increase the evaluability of an intervention through assisting the development of concrete, measurable goals (Rutman, 1977).

Scholars and researchers alike have long recognised the value of process evaluation, which surfaced around the 1970s (Pawson and Tilley, 1997). However, despite the numerous benefits associated with this method, its prevalence has increased remarkably slowly (Harachi *et al.*, 1999) and a consideration of process is still lacking from many evaluations (Gallant and Maticka-Tyndale, 2004; Harachi *et al.*, 1999).

As the primary aim of most HIV/AIDS education programmes is to effect behaviour change, outcome evaluations have been typically applied. These normally seek to quantitatively measure the extent to which an intervention has influenced the participants' 'knowledge, beliefs, intentions or behaviours', using indicators such as reported condom use, for example (Coyle, Boruch, and Turner, 1991).

Several reviews of evaluations of HIV/AIDS education programmes conducted around this period highlighted the relative absence of programme monitoring; for example, Kaaya, Mukoma, Flisher and Klepp's (2002) review of eleven school-based AIDS prevention programmes in sub-Saharan Africa found that only four included a consideration of the way in which the programmes had been implemented. Up until very recently, the majority of evaluations employed a quantitative approach to evaluation, attempting to measure impact through conducting randomised-control trials (RCT) and using methods such as questionnaires to generate outcome-level data. This resulted in many authors calling for more process evaluations to be conducted (Harachi *et al.*, 1999; Campbell and MacPhail, 2002; MacPhail and Campbell, 1999; Scott, 1992).

Noticeably, over the past five years, process evaluations have become more widely implemented in the field of Public Health generally (see, for example, Odendaal, Marais, Munro, and Van Niekerk, 2008) and in the field of HIV prevention specifically (see, for example, Ahmed, Flischer, Mathews, Jansen, Mukoma and Schaalma, 2006; Pettifor, MacPhail, Bertozzi, and Rees, 2007; Visser, 2007). However, a consideration of process is still lacking from many evaluations. In focusing solely on outcomes, numerous recent studies have continued to adopt the 'black box' approach to programme evaluation (Gallant and Maticka-Tyndale, 2004; Harachi et al., 1999); (see, for example, Magnani, MacIntyre, Mehyrar Karim, Brown and Hutchinson, 2005; Pettifor, Kleinschmidt, Levin, Rees, MacPhail, Madikizela-Hlongwa, Vermaak, Napier, Stevens and Padian, 2005; Jewkes, Nduna, Levin, Jama, Dunkle, Khuzwayo, Koss, Puren, Wood, and Duvvury, 2006). Consequently, several authors over the past five years have continued to call for a more consistent emphasis on process (Oakley, Strange, Bonell, Allen and Stephenson, 2006), stressing the need for programme monitoring to be included in all evaluations of HIV prevention programmes (Kim and Free, 2008; McCreary, Kaponda, Jere, Ngalande, Kachingwe Kafulafula, Norr, Crittenden and Norr, 2008; Visser, 2005).

Understanding HIV/AIDS intervention programmes and their evaluation

Research suggests that the most effective HIV-intervention programmes are both highly structured and theory-based (Babbie and Mouton, 2006; Kirby, 2000; Smith, Dane, Archer, Devereaux and Katner, 2000). Structure, here,

refers to the extent to which a programme is developed in a logical, organised, theoretically consistent way, whereby clear relationships exist between the different components of the intervention. Rossi, Lipsey, and Freeman (2004) emphasise the need for programmes to be founded on an explicit 'programme theory' in order to ensure that they are conceptualised in such a way that the social problem is appropriately addressed. A 'programme theory' can be defined as "(the intervention's) plan of operation, the logic that connects its activities to the intended outcomes, and the rationale for doing what it does" (Rossi *et al.*, 2004, p.44).

Traditionally, HIV prevention programmes concentrated exclusively on providing information to the target audience (Campbell, 2003). Such information-based interventions tend to be based on socio-cognitive models of behaviour which "posit that people consider positive and negative features of preventive behaviours and the balance will influence their behaviour" (Eaton *et al.*, 2003, p.158). They have tended to adopt didactic pedagogical approaches (Campbell, 2003).

Information-based HIV/AIDS intervention programmes have come under criticism for being founded on the assumption that an individual's behaviour is the result of rational decision-making (Skinner, 2001; Selicow, 2005). To the contrary, there is an overwhelming body of evidence to suggest that sexual behaviour is rarely determined purely by individual, rational, choices (see, for example, Aggleton and Campbell, 2000; Campbell, 2003; Eaton and Flisher, 2000). Selicow (2005, p.47) describes the emphasis on rationality as "misguided", arguing that there is no "one objective definition of what rational behaviour is". Indeed, the very idea of applying scientific concepts of objectivity and rationality to something as personal and emotionally-charged as sexual behaviour seems inherently inappropriate. Much research suggests a disparity between knowledge and behaviour, with many people continuing to engage in high-risk sexual practices despite having relatively high levels of AIDS awareness (Campbell, 2003; Campbell and Mzaidume, 2002; Eaton and Flisher, 2000; Levine and Ross, 2002). While provision of information is an important pre-requisite for behaviour change, in isolation, it often fails to effect such changes (Hubley, 2000). Thus, campaigns focusing solely on information provision have been criticised for their focus on individual persuasion (Campbell, 2003; Eaton et al., 2003; Skinner, 2001; Varga, 2001). Human beings do not live in a vacuum, but are influenced by a context to which they themselves contribute in shaping. Such information-driven models fail to take into account the numerous 'community and social processes'

which influence an individual's sexual behaviour (Campbell and Williams, 1998; Coulson, Goldstein and Ntuli, 1998; Furnham, 1988).

More recently, the most widely promoted approach to HIV prevention is peer education. The approach "typically involves training and supporting members of a given group to effect change among members of the same group" (Horizons, 1999, p.i). Unlike the information-based method, peer education adopts a participatory approach to education and places emphasis on context rather than content, with the aim of providing a space for participants to share ideas. There is much evidence to suggest that this approach, which rests on social constructionist identity theory, has a greater impact on HIV incidence and risk behaviour than information-based interventions (Horizons, 1999). The pedagogy of the peer educational approach will now be discussed in order to develop an understanding of processes behind its impact, a consideration of which constitutes an essential part of any comprehensive evaluation.

Freirian pedagogical principles form the cornerstones of the peer educational approach (Campbell and MacPhail, 2002). Freire (1972) argues that an individual must understand their given social situation before they can be expected to act on it; he promotes a 'problem-posing' approach to education centring on dialogue, whereby learners are encouraged to think critically. This focus on generating a safe space for discussion is particularly suited to HIV/AIDS intervention programmes as it responds to the sensitivity of the topic. The peer educational approach strives to develop a social environment that cultivates norms, values and identities which encourage sexual health (Gregson, Terceira, Mushati, Nyamukapa and Campbell, 2004).

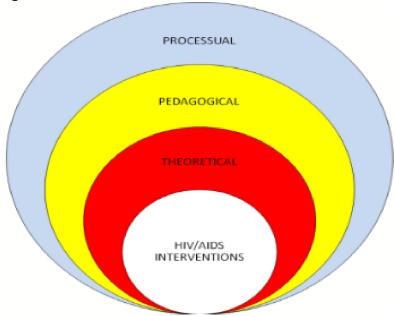
Freire (1972, p.31) argues that "educational projects . . . should be carried out with the oppressed in the process of organising them". Regarding beneficiaries as partners in the education process serves to empower those involved, giving them 'ownership' of the ideas whilst simultaneously tapping into the 'hidden strengths' of insider knowledge (Campbell, 2003; Selicow, 2005). In support of this, Uphoff, Esman and Krishna (1998) warn against adopting a 'cookie cutter' approach to education whereby an intervention is designed beforehand by an outside 'expert' and applied mechanistically across a range of social settings with no regard for local conditions. Interventions must instead be flexible and tailored to suit the needs of the target audience (Campbell, 2003; Varga, 2001). Aggleton (1991) emphasises that AIDS-education programmes must have a sound understanding of the target audience's specific sexual health needs.

Outcome evaluations have shown peer educational HIV/AIDS intervention programmes to be significantly more effective at impacting on HIV incidence and risk behaviour than information-based programmes (Horizons, 1999) but have not been helpful in highlighting why this is the case. In the light of this discussion this paper demonstrates how a process evaluation which incorporates a *theoretical* and *pedagogical* analysis has the potential to overcome this omission, through shedding light on the reasons behind an intervention's success or failure.

Towards a nuanced model for process evaluation

Emerging from the discussion above and what the paper advocates, is a model of process evaluation designed specifically for the systematic and comprehensive assessment of HIV/AIDS intervention programmes. The model proposes a multi-layered approach to evaluation and prompts a focus on three main categories: *theoretical*, *pedagogical*, and *processual*. While 'traditional' process evaluation models exist, they often emphasise pedagogical and processual aspects that need evaluation. The model we propose (see Fig. 1 below) extends this notion by promoting a more consistent and prominent focus on the *theoretical* orientation of HIV/AIDS intervention programmes through advocating a theoretical analysis of the pedagogical strategies employed.

Figure 1: A model for the process evaluation of HIV/AIDS intervention programmes



"The processual category encompasses the evaluation of an intervention's structure, development, implementation and delivery. It is proposed that, through considering the relationship between the different aspects of an intervention and considering the way in which they were developed, it is possible to forge an understanding of the processes underlying project outcomes.

The second category promotes a focus on an intervention's proposed pedagogical orientation which can be unearthed through analysing the intervention's curriculum.

The third category advocates a focus on an intervention's theoretical orientation, be it implicit or explicit. This entails examining the ideological stance and programme theory of the intervention into consideration and through investigating the way in which HIV/AIDS, as a topic for education, has been conceptualised.

Implementing process evaluation: a case study

By way of illustration, what follows below is a description and analysis of a small-scale, HIV/AIDS education intervention programme. The aim here is to highlight the contribution of, and insights to be gained towards understanding of HIV/AIDS intervention programmes, through the application of the process evaluation model above. As already stated earlier in the paper, questions were posed on how process evaluation can be applied to assess HIV/AIDS intervention programmes, the factors that process evaluation illuminates that other types of evaluation do not, and the extent to which process evaluation responds to challenges posed by HIV/AIDS as a topic for education.

The project under scrutiny is one of a number of projects established by the University of Cape Town's 'Students' Health and Welfare Centres Organisation' (SHAWCO), a student-run Non-Governmental Organisation (NGO). At the time the research took place the project was still in its infancy, having been running for only a year. Each year new volunteers, participants, and committee members are appointed. The programme is delivered weekly, after school, in a community centre owned by the NGO to a group of fifteen 12–13-year-olds. As such, the study adopted a case study research design; the unit of analysis being a single HIV/AIDS intervention programme.

The methodological questions that framed the research process emerged from the model presented above. Therefore, questions had to be posed that corresponded, and facilitated an insight, to the categories identified in the model: processual, theoretical and pedagogical.

The 'processual' questions aimed to examine the structure, development, implementation and delivery of the intervention. These questions are typical of conventional process evaluation and prompted a holistic consideration of the intervention.

The 'theoretical' questions concerned the initiation and conceptualisation of the programme. These were aimed at unearthing the programme planners' interpretation of the problem. These questions aimed to reveal the 'implicit ideas behind' the intervention (Pawson and Tilley, 1997) and, therefore, to expose its ideological context and theoretical foundation or 'programme theory'.

The 'pedagogical' questions asked 'what is the proposed pedagogical approach?' and 'How suited are these techniques to HIV/AIDS as a topic for education?'

Gathering information took three forms, namely semi-structured interviews, participant observations and content analysis. The research reported here included voluntary participation. While all 22 project members involved in the project were invited to participate in an interview, less than a third agreed. Seven project members (four volunteers and three committee members) were interviewed; of these, two participated in follow-up interviews. In addition to this, another individual who had worked in conjunction with the previous year's committee at the time of the project's inception agreed to participate, making a total of eight respondents.

Semi-structured interviews were conducted with committee members and volunteers, face to face, at various stages throughout the programme's first term in order to gain insight into the nature, for, process and outcome of the intervention. Interview guides were shaped by the model developed and focused on the three areas highlighted above. Each interview was between 30–90 minutes. Questions focused on the viewpoints of committee members and volunteers in order to gain an inside, subjective perspective of the intervention. Interviewing the learners themselves would have been preferable but, due to the ethical issues surrounding research with minors, this was not possible within the confines of the study.

Another source of data was participant observation. One of the authors fulfilled a 'researcher-participant' role (Gans, 1968, cited in Bryman, 2001) in that she attended meetings as well as programme intervention sessions. Observations, therefore, took two forms; first detailed field notes taken during and after all committee meetings, general staff meetings and training sessions and, second, classroom observations that were conducted during each of the four lessons.

Finally, qualitative content analysis was used to examine the programme's curriculum which provided insight to the intervention's pedagogical and theoretical stance.

Data was analysed largely inductively, but in the light of the theoretical and conceptual frameworks. The documents (interview transcripts and observation notes) were coded into different categories (as advocated by Miles and Huberman, 1994). Analytic memos were recorded in order to maintain consistency on the boundaries of each category (Strauss, 1987). The qualitative software package 'Nvivo 8' was used to code the data, which facilitated the systematic organisation, retrieval and analysis of data (De Wet and Erasmus, 2005). The coding process was performed continually as the data was generated, thus allowing each interview or observation to shape the direction of the next. The interview guides and observation schedules were continually revised and refined as new issues arose throughout the research process. Next, clusters and hierarchies of information were identified, establishing relationships between the categories. Segmenting the data in this way provided structure and continuity to the results, and increased the credibility of the resulting synopsis. Finally, the resulting descriptive information and the project's official curriculum were critiqued in order to establish what appeared to be missing from the programme.

The aspects that were drawn from the texts were framed by the theoretical and conceptual frameworks but I was not following any specific, pre-defined criteria. For example, the theoretical and conceptual frameworks suggested that certain pedagogical strategies (such as dialogue and participatory techniques) are more likely to be successful in effecting behaviour change than others; so during my analysis of the lesson plans I was looking for evidence of dialogical or didactic teaching styles in order to enhance my understanding of the project under evaluation.

Findings

Applying the proposed model of process evaluation generated both a 'natural history' of the programme (Scott, 1992) and an outline of its curriculum. Six distinct areas of interest emerged during the research process. These were: background and conceptualisation of the project, training, curriculum development, proposed content and pedagogy, implementation and running of the project, and project members' feelings about the project.

Background and conceptualisation of project

Despite the fact that this study focused specifically on the project's second year, it was important to investigate its history so as to frame the study, contextualise the results, and shed light on the intervention's ideological stance.

An in-depth interview with the Project Leader revealed some ambiguity over what prompted the establishment of the project in the first place. When asked about the initial rationale behind the intervention, he responded as follows:

... if I look at the way (the project) started, it started because of a question a volunteer was asked in one of the lessons (from another project within the same NGO). They were doing an AIDS day, like all the projects should do, and one of the learners asked a volunteer 'Do you always use a condom when you have sex?' and she couldn't answer the question, she gave a very bad answer and basically said 'I'm uncomfortable answering that question' which is not the type of answer I think we should be giving...

Whether this incident was seen to be illustrative of a more general social problem was not made clear. It also emerged that there was no policy guiding the initiation of the project.

When asked about the aims of the project, the project leader claimed that he intended to 'give (the learners) a wakeup call', 'to provide accurate information of all the topics' and to encourage 'informed decisions'. However, these ideas were never put in writing and appeared subject to continuous revision. Even well into the first term of the project, the project leader admitted that his ideas kept 'changing and evolving'.

In a preliminary interview the project leader was asked to outline the focus of the programme. He made reference to a number of social problems, stating that

...the whole goal of (the NGO) is to get the learners through to matric and on into university and then on into the big wide world...our hope is to do some sort of behavioural change intervention while they're still young enough and hopefully... the learners will come out and be a better part of the community,

thus illustrating that the project's intended outcomes were wide-ranging and vaguely defined. During the same interview, the project leader expressed a desire to include 'issues around HIV/AIDS, sex and sexuality and any other social issues that (the learners) may be dealing with in their communities' within the scope of the project and went on to explain that the project aimed to influence 'the choices and decisions (the learners) are going to make about their future and their bodies, while they are still young enough'. In addition to this, the project leader and the curriculum planner emphasised the importance of improving the participants' reading and writing skills.

Training

The training took place at the same time as, but independently of, the development of the curriculum. Interestingly those responsible for planning the curriculum did not attend, and were unaware of the content of, the training sessions. The researcher's attendance of the training sessions revealed that there was no explicit reference to the project's aims and objectives or intended outcomes.

There were four training sessions in total, each lasting for 1–2 hours. Attendance ranged from seven to eleven (out of a total of 14) volunteers. Training was provided by two external organisations. The first organisation provided basic, information-based, training on the science of HIV/AIDS and the other provided training in participative pedagogies.

Feedback on the training was mixed. Volunteer 4 thought the training was 'great', and believed that '... using art and drama to teach about HIV/AIDS is a good way forward'. Others regarded the content of the drama workshops as being 'common sense', or as diverting attention from the more important issue of information provision. For example, Volunteer 6 said of these workshops:

I don't think (the drama-based training) helped me phenomenally. . . in anything. What did help, the only thing that helped was the very first one, where they actually explained how the virus works. The other ones weren't that useful to me. I mean they were fun but that didn't help me to now go out and teach.

Curriculum development

The curriculum was developed by the appointed 'curriculum planner' and the project leader. My interview with the former revealed that she received very little guidance on how to develop the curriculum. With regards to this she said,

... I was given the curriculum from last year and I was told, this is not what we wanna do, we want something different . . . so, ja, I didn't have any aims and objectives. I kind of came up with my own.

She was unaware of a needs assessment that had been conducted by the previous year's volunteers, which the project leader had previously informed me would form the basis for the project in its second year.

The curriculum planner explained that she had initially developed a curriculum independently, based on her own research which entailed visiting websites, studying her younger brother's life orientation books (part of the South African National Curriculum), visiting her former primary and secondary schools to borrow resources and ask for advice from the life orientation teachers, and going to a clinic in Gauteng (one of nine provinces in South Africa) to obtain literature on HIV/AIDS. The curriculum was developed independently of the training (as well independently of input from the rest of the team). The project leader did not attend the sessions for the first half of the semester and the curriculum planner did not attend at all.

Curriculum: proposed content and pedagogy

The start date for the project was postponed, leaving time in the first term for only four lessons. As mentioned previously the curriculum was completed behind schedule, which resulted in the volunteers having to improvise for the first two sessions. In total, two short lesson plans were provided for the project's first term (Sessions 3 and 4).

The lesson plans focused on the provision of information and gave direct instructions as to the issues that should be covered; including directions for how long should be spent on each activity. For example, Session 3 centred on providing information about the transmission of HIV. This included, first, information about the ways that the virus can be transmitted (cited as unprotected vaginal or anal sex, and transmission through blood), second, a description of what opportunistic infections are, and, third, scientific information about how the HI-virus invades a CD4 cell and reproduces. This was followed by a scientific explanation of why there is higher HIV prevalence among women than men. Reasons given included the fact that 'there is a higher concentration of HIV present in semen than vaginal fluids' and that 'younger women are more prone due to the fact that their genital tract isn't fully mature and vaginal excretions aren't copious and therefore prone to mucosa lacerations'.

The activities proposed in the curriculum centred on reading and writing. The participants were issued with 'learner manuals' and instructed to fill in worksheets, complete diagrams and create information sheets. There was no emphasis on informal dialogue, although the lesson plans did instruct volunteers to 'discuss worksheets with the learners' and to 'ask the learners if they understand'.

The feedback on the curriculum was overwhelmingly negative. All of the interviewees who spoke about the curriculum during the course of the interview, did so in a predominantly critical light. Of the 17 segments of the data that were categorised as 'project members' opinions on content', fourteen were negative and three were positive. The curriculum was criticised for being too conventional and not interactive enough.

Implementation and running of the project

Since no lesson plans were provided for Sessions 1 and 2, the volunteers chose to focus predominantly on the provision of information, covering issues such as condom use, the 'window period' and non-sexual transmission. In addition to this, the volunteers attempted to explore participants' feelings and opinions on HIV/AIDS and their attitudes towards people living with HIV through posing questions such as 'what would you do if someone you loved had AIDS?' Discussions tended to jump from one issue to the next, with no real structure or continuity and many questions were left unanswered. This, it would seem, was largely due to there being no lesson plans to frame the sessions.

For Sessions 3 and 4, and while the proposed content was loosely followed, the suggested time plan was not adhered to and, without exception, the lesson plans were not completed. The sessions also centred on information provision with little or no time being spent discussing the participants' opinions, feelings or attitudes.

As stated above, the lesson plans proposed a traditional teaching style whereby the participants were to be prompted to take turns to read aloud and complete worksheets, but this did not occur in practice. The volunteers split the learners into groups of four or five. Despite the fact that the lesson plan gave only one instruction to initiate a discussion, in practice the sessions maintained a question and answer format, with significantly less time being devoted to reading aloud and little or no time being spent writing (depending on the group).

The volunteers frequently encouraged the participants to raise questions and to discuss certain issues in more depth, as opposed to adhering rigidly to the curriculum. However, while the participants were given the opportunity to shape the course of the sessions to a certain extent, the volunteers remained very much in control of the agenda with regards to both form and content.

The observations revealed a number of factors which had a detrimental impact on the delivery of the curriculum. These included high noise levels, a shortage of space, a lack of engagement from the learners and a lack of leadership and organisation on the part of the volunteers and project organisers.

Project members' feelings about the project

Despite the challenging circumstances that the project members were faced with, three out of the four volunteers who were interviewed offered some positive feedback about the project. In particular, the volunteers reported enjoying the discussions when they were flowing well. For example, Volunteer 4 said

. . . it was really good, ja, we had the boys and (volunteer 3) was really into it. . . I think it was quite a good atmosphere I really liked it.

Similarly, Volunteer 2 said

The first session I thought was really good, I liked the way we had the big circle and we were all kind of in one group. . . I think it's going well I think it's a really good cause so I don't mind all the mess-ups and everything we have.

However, reports of feeling 'disappointed', 'frustrated', 'demotivated' or simply 'sad' at how the project had turned out were considerably more common among the respondents; the data coded under 'project members' feelings about the project' consisted of 4 positive and 21 negative comments.

Discussion

The aim of the study the paper draws on was to highlight the understanding that can be gained through the application of the process evaluation model advocated here (see figure 1, p.121). What follows is a synopsis of the insights that were gained, which might have been overlooked in other forms of evaluation.

Insights gained through the application of the process evaluation model

The research revealed a number of factors which, it is argued, detracted from the intervention's potential for empowerment and the collective renegotiation of social identities – identified as 'key preconditions for programme success' (Campbell and MacPhail, 2002). These were: first, a lack of structure and theoretical grounding; second, the absence of a needs-based approach; third, a lack of ownership; fourth, the adoption of a didactic teaching style and finally, a de-contextualised, information-based approach.

It has been argued in this paper that the most effective intervention programmes are both highly structured and theory-based (Babbie and Mouton, 2006; Kirby, 2000; Smith *et al.*, 2000). The findings suggest that the project under evaluation was lacking in both respects. The different elements of the programme (aims and objectives, intended outcomes, training and curriculum) were developed independently of one other, resulting in a lack of consistency on many levels. For example, the aims and objectives (which were in fact never finalised) did not shape the curriculum and the training did not correspond directly to the material the volunteers were expected to teach.

The ambiguity over the project's aims, objectives, and intended outcomes (apparent in comments such as 'some sort of behavioural intervention' and 'be[ing] a better part of the community' indicates a lack of clarity and structure in the project's conceptualisation. A lack of clearly defined, explicit, goals can have detrimental repercussions, both for the accomplishments of the project itself (in deeming it directionless) and for the evaluation of outcomes (Babbie and Mouton, 2006; Rutman, 1977).

The research revealed that the programme had no explicit theoretical foundation, an omission which manifested itself in several ways. For example, the volunteers' contradictory accounts of the appropriateness of the training indicates that they had contrasting ideas about the pedagogical stance of the intervention and results from a lack of programme theory.

The findings indicate that the project did not adopt a needs-based approach; identified by Aggleton (1991), Campbell (2003) and Varga (2001) as essential for the development of appropriate and effective interventions. For example, the project leader's account of the rationale behind the project suggests that it was founded in response to a single interaction between a student volunteer and a participant from another project within the same NGO. This presumably was understood to be typical of a more widespread issue, namely the lack of opportunities young people have to talk openly about sex and HIV/AIDS. While it is possible that this specific incident is characteristic of a more general problem, there is no evidence to suggest that the project is addressing the specific sexual health needs of the participants. The curriculum planner developed the curriculum based on her own independent research; she did not consult with the learners and was unaware of the needs assessment that had been conducted by the previous year's volunteers.

Ownership was highlighted earlier as an empowering process that contributes to the development of appropriate interventions. (Campbell, 2003; Selicow, 2005). Several aspects of the programme emerged as undermining the participants' potential for ownership. For example, the observations revealed that the participants were denied the opportunity to influence the direction of the sessions to any extent and there was little evidence of the participants being involved as partners in any stage of the intervention. While some dialogue did occur, the discussions were largely controlled by the volunteers; the nature of the interaction (with volunteers posing questions and learners raising their hands to answer) did not constitute an open forum for discussion. This meant that the participants were largely denied the opportunity to influence the direction of the discussions, which is likely to have detracted from their sense of ownership.

The curriculum recommended traditional teaching methods and placed a great emphasis on reading aloud and writing. Whilst not strictly didactic, these proposed pedagogic strategies do not diverge far from the underlying principles of this approach; namely, that the participant is a passive recipient of information rather than a contributor or partner in the education process.

The findings demonstrate that the project privileged an individualistic, information-based, approach. The lesson plans are focused almost purely on the provision of factual, scientific information. For example, the lesson plan provided a scientific explanation of why there is higher HIV prevalence among women than men. This account constitutes an individualistic stance in that it overlooks social factors such as gender inequalities which, research suggests, contribute to higher HIV prevalence among females (Campbell and MacPhail, 2002; Gregson, *et al.*, 2004).

The contribution of process evaluation to HIV/AIDS intervention programmes

The findings demonstrate how process evaluation makes visible aspects of an intervention that other types of evaluation do not. Through a focus on context, interaction and understanding, the research in this paper highlights key omissions from the project under evaluation and draws attention to its inherent contradictions, ambiguities and conceptual problems.

The process evaluation model allowed a programme's theoretical and pedagogical orientation to be unearthed and critiqued and for problematic issues to be noticed as and when they occurred. The application of the model also revealed some of the detrimental effects of developing an HIV/AIDS intervention programme without a solid structure or a firm, appropriate, theoretical grounding; aspects that would not otherwise be noticed in summative forms of evaluation.

A process evaluation that takes account of processual, theoretical and pedagogical factors has the capacity to respond to the complexity of the HIV/AIDS epidemic and thus can enable the development of more appropriate, comprehensive, and effective HIV/AIDS interventions

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Financial accountability at schools: challenges and implications

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Abstract

Financial accountability is the cornerstone of ensuring that schools disburse funds allocated to them for the sole purpose of advancing the best interests of the learners. The prescriptions of the South African Schools Act clearly locate financial accountability on school governing bodies and, as such, make financial accountability a legal requirement. We examined the challenges experienced by school governing bodies in executing their financial accountability responsibilities. It emerged from the findings that schools do experience challenges in this regard. The main contributory factor seems to be largely attributed to the lack of capacity to execute financial accountability functions as manifested in budgeting, accounting and reporting functions. While there could be reasons for this, including the supposed illiteracy of the parent-governors, the implications seem to relate to the very core of legislation concerned with school governance. In essence, this implies a review of the Schools Act in terms of functions that are specialised and that require expertise.

Introduction

Proper management of school finances is pivotal to the success of all educative teaching endeavours of any school. Equally important is financial accountability, which is, according to legislation, a legal requirement at schools. Sections 36 and 43 of the South African Schools Act No. 84¹ of 1996 (as amended) (Republic of South Africa, 1996) make it mandatory for schools to manage school funds and take responsibility to implement all the necessary financial accountability processes. This implies ensuring effective, efficient, economical and transparent use of financial and other resources within the school, which includes taking appropriate steps to prevent any unauthorised, irregular and fruitless and wasteful expenditure which in essence, implies being accountable for the school's finances (Republic of South Africa, 1999).

Robinson and Timperly (2000, p.67) define accountability as "a condition under which a role holder renders an account to another so that a judgment

Hereafter referred to as the Schools Act.

may be made about the adequacy of the performance", and point out that accountability is equated with the act of reporting. Lewis (2003) defines financial accountability as a moral or legal duty, placed on an individual, group or organisation, to explain how funds, equipment or authority given by a third party has been used. In the school's case, this includes parents and the Department of Education. School financial accountability, therefore, stems from the notion of accountability as reporting about school finances to school stakeholders.

Despite what financial accountability means, as well as its attendant legal prescriptions, schools continue to experience problems regarding it. Bush, Clover, Bisschoff, Moloi, Heystek and Joubert (2006) report that a large-scale survey of principals in the Gauteng Province demonstrated anxiety about managing finances and the need for additional training in financial management. Mestry (2004) argues that there is indeed lack of capacity for school governors, especially lay governors to play an active role in, for example, school budgeting. Bush et al. (2006) cite Tshifura who reports an instance where there was mistrust between certain school governors and the school principal following a decision by the principal and the treasurer of the school governing body (an educator) on how to use funds which the school governing body did not budget for. Bush et al. (2006) further cites a Centre for Education, Policy and Development (CEPD) study that found lack of transparency at some schools, which led to mistrust among stakeholders. Mestry (2004) indicates that there are reports that principals and school governing bodies have been subjected to forensic audits by the Department of Education due to the mismanagement of funds through misappropriation, fraud, pilfering of cash, theft and improper control of financial records.

Illiteracy, lack of experience and training of lay school governors have been cited as the reasons for poor financial management and accountability at schools (Bush *et al.*, 2006). Despite numerous training efforts by the Department of Education, financial management at many schools seems beset with challenges (Joubert, 2009). If such reasons as those cited above are considered, it can be deduced that lack of training, illiteracy of the parent governors and generally corrupt practices from some school principals and school governing body members are responsible for poor management of finances at schools. In addition, it can be deduced that poor training, combined with poor assessment of the implementation of financial accountability practices by the Department of Education (Dieltiens, 2005; Mestry, 2006) contribute to this state of affairs.

In light of the foregoing exposition regarding financial management at schools, this study aimed to investigate the state of financial accountability at schools. To investigate this, the empirical inquiry sought to answer the question:

What are the challenges facing school governing bodies with regard to financial accountability and what are the implications of such challenges?

This question was investigated by examining how elements of financial accountability were carried out at schools.

Conceptualisation of financial accountability

This study is underpinned by the United States-based Financial Accounting Standards Board's (FASB) conceptual framework for reporting and accounting. According to the FASB (2006: p.x), the objective of general purpose external financial reporting is to provide information that is useful to present and potential investors, creditors and others in making investment. credit and similar resource allocation decisions. Based on this objective, financial accountability is conceived as concerning tracking and reporting on allocation, disbursement and utilisation of financial resources, using the tools of budgeting, accounting and auditing (Brinkerhoff, 2001). Brinkerhoff (2001) states that financial accountability rests upon an appropriate legal framework, which in many cases includes constitutional provisions, laws and regulations, such as laws on institutional structures mandated for executing and monitoring the budget, laws on public procurement, regulations on accounting and bookkeeping, property management and so on. To accomplish the objective of financial accountability, FASB (2006) postulates that financial reporting and accounting should communicate information about an entity's financial position as reflected by assets and liabilities, transactions and other events and circumstances that change them in terms of financial performance and cash flows.

The usefulness of the financial information refers to the ability of financial reporting information to assist users in decision-making and is characterised by features such as reliability, which refers to being verifiable and being a faithful representation, reasonably free of error and bias, and relevance, which refers to the existence of a close relationship between the financial accounting

information and the purposes for which the information is prepared (Keating and Frumkin, 2000). This is dependent on the organisation's internal accounting system. School financial accountability is therefore a function of proper financial accounting and reporting processes.

According to Lewis (2003), financial accountability describes the systems and procedures used to keep track of financial and monetary transactions that take place inside an organisation and therefore it is a system of recording, classifying and summarising information for various purposes. According to idasa (2004), financial accountability refers to producing regular financial reports to those with an interest and a right to know, proving that leadership has control over financial decisions and accounting for funds by producing documentary proof of receipts and payments.

Section 16(1) of the Schools Act locates the governance of schools on school governing bodies, which are elected democratically by school stakeholders. According to Van Rooyen (2007), the governing body is charged with the financial accountability function of school financial management which, as alluded to earlier, entails an obligation to account for the financial actions as is legally prescribed. This is provided for in terms of establishing a school fund, collecting and controlling funds and, most importantly, ensuring that school funds are disbursed exclusively for educational purposes (cf. Van Rooyen, 2007). In this regard, the Schools Act (Funding of Public Schools: Chapter 4) specifically directs that the school governing body must, inter alia, prepare a budget each year according to guidelines determined by the Member of the Executive Council which, must be tabled before and be approved by the general meeting of parents; keep records of funds received and spent by the school and keep a record of its assets, liabilities and financial transactions; and as soon as practicable, but not later than three months after the end of each financial year, draw up annual financial statements in accordance with guidelines determined by the Member of the Executive Council. School governing bodies can achieve this by adopting and implementing best financial accounting practices (Republic of South Africa, 1999) which include ensuring that:

- the systems of financial management and internal control established for the school are carried out:
- they are responsible for the effective, efficient, economical and transparent use of financial and other resources; and that

they take effective and appropriate steps to prevent any irregular expenditure or fruitless and wasteful expenditure, and are responsible for the management, including the safeguarding of the assets and the management of the liabilities.

Section 43(1–2) of the Schools Acts also states that the governing body must appoint a person registered as an accountant and auditor in terms of the Public Accountants and Auditors Act, 1991 (Act No. 80 of 1991) to audit the records and financial statements, and if the audit is not reasonably practicable, the governing body of a public school must appoint a person to examine and report on the records and financial statements. Such a person must be qualified to perform the duties of an accounting officer in terms of the relevant Act or a person who is approved by the Member of the Executive Council for this purpose.

The provisions of the Schools Act in so far as financial accountability is concerned, imply a reporting function. It is also clear that the Act, as directive to governing bodies and school principals, locates financial accountability within a legal framework and thus implies that schools are, by law, obliged to adhere to principles of school financial accountability. This can be realised through the implementation of proper financial management and accounting systems which, in essence, imply effective financial management and include, as main elements, budgeting, auditing and reporting.

Budgeting entails planning for school finances (Niemann, 2002). Gildenhuys (1997) defines a budget as a financial statement, which contains the estimates of revenue and expenditure over a certain period of time. According to Hôgye (2002), the budget is a policy statement, declaring the goals and specific objectives an authority wishes to achieve by means of the expenditure concerned. Applied to a school, this means that a budget should be a scheduled plan which indicates estimated future income and expenditure which, in addition, serves as an important mechanism used in ensuring financial accountability and enables an individual to establish at any stage whether expenditure exceeds the budgeted amounts and to take timely remedial steps. A budget thus serves as a financial monitoring tool in that it enables the governing body to compare actual receipts and expenditures to the budget with timely variance explanations (Cuomo, 2005).

The budget also serves as a planning, controlling, monitoring and reporting tool (Niemann, 2001). It is for these reasons that a budget becomes one of the main elements of accountability. The budgeting process may look easy and

within the competency of the school governing body. However, as articulated by Mestry and Naidoo (2009), owing to the dearth of financial management skills among many school governors, the preparation of effective budgets at schools is unlikely. Developing a school budget requires time and skill and can thus be considered a specialised function requiring, as it were, specialised skill.

Auditing relates to external financial control which, according to Maritz (2005), is a form of external control and is a comprehensive analysis, by a professional from outside an organisation, of that organisation's financial management activities. Lewis (2003) describes an audit as an independent examination of records, procedures and activities of an organisation which leads to a report outlining the auditor's opinion on the state of affairs. In this regard, the School's Act (Section 43(1)) clearly stipulates that the governing body of a public school must appoint a person registered as an accountant and auditor in terms of the Public Accountants and Auditors Act of 1991 to audit the records and financial statements and produce the results in a report which gives an audit opinion as to the true and fair view of the state of affairs of the organisation and operations for the period. For the school, the finance committee must reconcile all financial documents, files and ledgers, before the end of January and submit them to auditors, who must complete the audit and then provide a report to the governing body (Van Rooyen, 2007).

Reporting implies providing a financial report on how public money is spent and, as such, it shows how a school is funded and from which sources (Maritz, 2005). Therefore in terms of accountability, financial reporting provides an opportunity for the school to report to the community namely, parents, learners as well as the government, and should account for the ways it has used resources provided by the government and earned by the school for the education of learners. With regard to reporting, Van Rooyen (2007) points out that the reports must be made on a weekly and monthly basis, at meetings of the school governing body and of the parent community.

Annual financial reporting can be regarded, perhaps, as the most important component of school financial accountability. According to KwaZulu-Natal Department of Education and Culture (2002b), its purpose is to provide financial information to the governing body, parents and other interested parties and, as such, these statements form the basis of the governing body's external responsibility to the community which, in essence, implies accountability. Indeed, this is a legal requirement stipulated by the Schools Act (Section 42(b)) that the governing body of a public school must, as soon

as practicable, but not later than three months after the end of the financial year, draw up annual financial statements in accordance with the guidelines determined by the Member of the Executive Council. The governing body is thus obliged to report on school finances, particularly to the State and to the parents. In the case of the State, the school governing body should submit audited annual financial statements to the department of education while, in the case of the parents, the governing body can report by availing audited financial statements for self-scrutiny, reporting at the parents' annual general meeting or issuing special newsletters and circulars on a regular basis and at parent evenings.

Empirical research

We used a qualitative enquiry as we wanted to gain an understanding of the state of financial accountability at schools from participants who would give the most unbiased accounts. In this regard, we used purposeful participant selection for selecting the research sites which, according to Creswell (2009), relates to purposefully selecting participants or sites (or documents or visual material) that will best help with the understanding of the problem and the research question, and may include the research setting, participants or actors, events and the process. For this reason and in our judgement, educatorgovernors and departmental officials charged with school governance responsibilities were the most appropriate participants to help us understand financial accountability challenges at schools. For purposes of convenience, participants were drawn from the historically disadvantaged primary and secondary schools in the Sedibeng Districts of the Gauteng Department of Education. To this end, 15 Educator-governors, five Institutional Development and Support Officers (IDSOs)² and an official in charge of school governance at the Gauteng Department of Education's Head Office were selected as participants. Convenience participant selection involves selecting cases that are easily obtained and, is according to Thomas and Nelson (2001), used because the purpose of the study is not to estimate some population value, but to select cases from which most can be learnt. In addition, convenience selection was used because there was no intention of comparative analysis among schools, but rather an understanding of the state of financial accountability. Educators were thus from different schools, with ten from primary schools and five from secondary schools.

The IDSOs, are charged with the support and development of schools.

The inquiry used the telephonic and one-to-one interviews lasting three quarters of an hour for data-collection. The telephone interview was conducted with an official in charge of school governance at the Department's Head Office and was preferred for being time-efficient, cheaper than the face-to-face interview and a written survey, useful for gaining rapid responses and for being useful in collecting even awkward, embarrassing or difficult matters (Cohen, Manion and Morrison, 2000). In securing the appointment, a preliminary conversational discussion was held in preparation for the interviews. Cohen *et al.* (2000) point this out as a necessary step for ensuring that telephonic interviews realise their potential.

An interview schedule with similar questions was used for all interviews. To establish validity and reliability of the interviews, we identified the subject of study as the variables expressing financial accountability and referred to the parameters describing elements of school financial accountability (De Vos, 2002:). It was also ensured that the interviews, though semi-structured, had the same format and sequence of words and questions for all the respondents (Cohen *et al.*, 2002). Data obtained from the interviews were analysed by means of procedures typical of qualitative research (cf. De Vos, 2002). Suffice it to say that this entailed analysis and process note-taking during interviews, which involved a meticulous ascription of responses to aspects relating to financial accountability at schools (cf. Cohen *et al.*, 2000), and involved noting regularities or commonalities and emphases in participants' responses. This way trends in the practice of financial accountability at schools were identified.

Interviewees gave their informed consent to the interviews. They were assured of the confidentiality of their participation and that the research report would not reveal their identities or identities of their schools. As such, pseudonyms were used in the report and direct reference was made to participants' schools.

Results

The questions asked related to how schools were executing financial accountability elements as manifested in budgeting and reporting. The responses from the interviews, while not representative of the population of schools in the Gauteng Province, provide some important insights into challenges relating to financial accountability at schools.

Budgeting

Questions with regard to the budget related to the budgeting and expenditure processes at schools. From the side of officials, comments indicated that schools did engage in budgeting. However, IDSOs' remarks indicated that they did not really know how the budgeting process took place at schools. Mr Maax, an IDSO, remarked that at most schools the budget usually became the responsibility of the principal and the School Management Team (SMT):

I do not know how schools do their budget, . . . the SGB (school governing body) must play a very prominent part in the drafting of the budget. ...but I know that SGBs in township schools are not financially literate, so that the principal and the members of the SMT play the important role in the drawing of the budget.

It was also found that, while schools did engage in budgeting, this was often done for purposes of compliance with departmental regulations and that the budgets were drafted for purposes of adherence to submission requirements to the department and did not really focus on the needs of the schools. This was aptly expressed by the Head Office official:

. . . It is the responsibility of the SGB to identify the needs of the school, prioritise them, and in a parents' meeting, explain in detail how the monies are going to be spent. However, if you look at the budgets drafted year in and out by schools, for instance, you find that a school has budgeted for paving. The following year there is the same amount budgeted for the same thing. Whatever is done in schools, there is no sustainability, and that creates a very serious problem.

Interestingly, he reasoned that some of the schools evidently did not receive proper training on how to execute the budgeting function. This notion is evident in educator-governors' comments about the budgeting processes at their schools. It emerged that in one school, the figures put in the budget did not correspond with the needs of the school and that the budget was just a formality. Ms Zethu, an educator-governor from a primary school, rued the fact that there was no transparency in the drawing of the budget at their school:

... the principal decides on what will be bought, then calls an SGB meeting, where we are presented with the budget. No one is expected to question. The parents have no say. The LSTM³ portion is done by one HOD and the principal.

Another primary school educator-governor, Mr Peter, remarked that for the two years he had been a school governing body member, he could not recall being in a budget meeting. He stated:

You can't believe I have served in the SGB for two years, I don't remember the SGB sitting together, drawing a budget. In fact, the budget is drawn for the district office. Otherwise, I think, if it was not for that, we were not going to draw it or have it.

Of the educator-governors interviewed, four indicated that their budgeting processes were done properly. Their responses indicated that at their schools there was transparency and involvement of various school committees in the drawing up of the budget, notably, committees involving educators. Despite this, it was also clear that not all governing bodies involved parents-governors, mainly because of their supposed illiteracy.

Another problem related to expenditure being in line with the budget. It was clear that expenditure at schools was not according to the budget. The Head Office official pointed out that expenditure at schools was not according to the budgets. He made the point that when analysing budgets drafted each year by schools, it would be found that a school budgeted for an item in the same manner and allocated the same amount of money for that item for two consecutive years, which indicates that budgeting was not done for purposes of expenditure and accountability. Furthermore, he hinted at shady practices at schools, "We know of instances, where principals engage in cheap labour, but pay large amounts of money, and that is wrong." In this regard, he alluded to misconduct cases lodged against some school principals who actually connived with service providers to claim amounts of money that were higher than the services they rendered to schools.

This is also indicative of schools not spending monies in terms of the best financial accounting practices, which stipulate, *inter alia*, that effective and appropriate steps must be taken to prevent any irregular, fruitless and wasteful expenditure and, in addition, expenditure must be lawful and authorised. Most educator-governors expressed similar sentiments. Mr Khudo, from a

³ LSTM: Learning Support and Teaching Material

secondary school, hinted at unauthorised expenditure, "... The principal, at any time when he wants to spend money, just buys without even consulting the SGB", and further stated, "Even if we want to stick to the budget, the principal brings issues that were not budgeted for, and the chairperson will agree with him. . . We just keep quiet, because our principal wants us to do things the way he wants". Ms Gada from another secondary school concurred with the notion that there was non-adherence to the budget, though for 'proper' reasons, "especially when there is something very important that was not budgeted for".

On how the governing bodies exercised control over their finances, there were mixed accounts. While schools seemed to have policies directing how financial control processes were to be executed, the implementation of such policies was doubtful, which was therefore indicative of poor budget and expenditure control. The Head Office official indicated that, from a scrutiny of school financial records, it was clear that what schools had on paper, was actually not the case in practice, which re-emphasised the fact that records were compiled as a matter of compliance with departmental regulations. He observed:

. . . analysing the records, it seems implementation of those policies is sadly poor or not adhered to. Yes, reports from district officials are well done. They say only nice things about schools. But, when you go to schools, you find that so many things are contrary to the reports given about those schools. Furthermore, I think from the districts officials' point of view, in schools that are producing good results, it is taken for granted that their finances are running smooth.

From his account, it also emerged that there was a challenge regarding district offices' monitoring of what actually happens at schools. Mr Dondo, an IDSO seemed to agree and stated:

Well, I must admit. We do not really get to check if schools have control systems in place, or if they do, they are implemented. It is only when a case has been reported that they (financial records) are checked thoroughly. It is taken for granted that, one cannot submit a document that is self implicating to the district. . . . But in all earnestness, it is not easy to see how the monitoring is done. Those records may very well be 'cooked'.

Educator-governors expressed strong opinions about the control of finances at their schools as stated by Ms Cand, a primary school educator-governor:

. . . it is a hopeless situation. When what is budgeted for differs from the actual expenditure, clearly there is no control. This is done hurriedly when books have to be audited. That is the part we absolutely never get to be involved in. Of course I think those books are doctored. . . . We do not know. As I said before, we are not involved. We are just told about this and that. I personally have not seen any bank reconciliation being done. Maybe, they do it. Only the principal and the so-called finance officer know.

Some educator-governors indicated clearly that there was no monitoring of the implementation of policies for financial control. Mr Zonki from a secondary school commented that they, as governors, were not involved and were just told what was done. Another educator-governor from a primary school, Ms Siphila indicated that she did not think financial record books were controlled and that sending them to the district was a mere formality. Two educator-governors stated emphatically:

Well, there is no transparency. Honestly, I do not know if this is done, or if it is, I'm not sure it is a true reflection of what is happening

– Mr Peter

Monitoring? Monitoring what? We do not know. As I said before, we are not involved. We are just told about this and that — Mr Khudo

Financial reporting

Financial reporting, the most important element of financial accountability, entails producing regular financial reports for those with an interest and a right to know. Questions in this regard related to how often schools report about expenditure, how and when financial reports are given to parents and educators. From participants' accounts, it was evident that most schools did submit audited financial records to the department as required by law. Although not all schools' records were checked, it was apparent that not all reports gave a reflection of what was really happening at schools. To this end, the Head Office official commented:

. . . but from those that we manage to check, it is clear that there are differences among schools. As I pointed out earlier, some details seem to be the same this year and last year. One can conclude what that means. . . . Authentic? I'm not sure. You know, there are cases handled by the Labour Relations Unit where it becomes clear that there are conflicts on the handling of funds in many schools. There was even a time when the Department considered withdrawing Section 21 functions from many schools. So you see, there may be major problems.

It was also clear from the IDSOs that there were doubts as to the financial reporting aspect. While reporting was done to the parents, it is not clear if the objective of such an exercise is followed. Mr Thima explained:

They do send audited financial records to us, which gives the impression that they do report. What I can't say for sure, is whether they report to parents and whether these reports are authentic. Often there are cases where there are allegations of fraud, 'doctored reports' and parents not being given financial reports. As far as educators are concerned, they seem not to be informed.

Another IDSO, Mr Deve, was much more direct in answering the question. He remarked that parents did get reports, but he doubted if the intention was to make them understand as partners with the schools or if it was just a formality to comply with the Schools Act. He commented:

Most principals claim that parents are illiterate and would not understand all the intricacies of the financial management jargon. I often ask, what exactly do they report? You see, financial reporting to parents seems just a formality. I know. Even in my own child's school, the report is just a summary with figures. It doesn't show me how exactly my child benefits from what we pay. So I think while they do have general meetings and report, the intention is not for parents to understand.

Another IDSO, Mr Lokane, indicated that was one difficult issue to assess. She alluded to parents' illiteracy as perhaps a factor. She reasoned:

Often principals complain that parents do not understand the reports read to them. As such, they have to summarise the reports. But then, some parents do complain about not being informed. This goes for teachers as well. They often complain that they do not know what is

happening with the school funds. They just see things being bought. How much the school has, they are not told. When they need money for things like transport to workshops and meetings, they claim that they are told there is no money, despite these being budgeted for. So you see, it is not easy to know if reports are made to parents and educators.

Educator-governors also related accounts indicating numerous challenges including parents not attending meetings, not understanding the reports they were given and not reporting the true reflection of the schools' finances. These views were expressed in the following comments:

You are asking an important question. I sometimes ask myself if this exercise is worth the effort. We do our best to ensure that our financial management is effective. We do hold meetings to report about finances, but the attendance is poor. Even those parents who attend, seem not to understand. But then, in our school we believe that the more transparent we are, the more trust we get from parents. Judging by the donations and support we get, I think our financial management and accountability do work

— Mr Vubu, a primary school governor

We do hold meetings, even if we report what we do not practice. It is frustrating to listen to the principal in the parents' meeting telling lies about how we have spent the money. There is no financial report given to educators

- Ms Dimbi, a primary school governor

Look, our principal runs a one-man show. You dare not challenge him. Since being declared a no-fee school, it has become worse. We are not informed of the financial status of the school; and we are SGB members. The chairperson is simply manipulated. Towards the audit of finances, the principal and finance officer are not available for some time. They claim to be busy with reconciling financial statement. This is where I suspect the manipulation of figures is made

– Mr Hinza, a secondary school governor

One educator-governor, Ms Sihlo from a primary school, however, gave a positive outlook, which indicated adherence to financial reporting principles. She proudly expounded her school's position:

We have a format that we follow on a monthly basis. The financial report is given by the SGB in the staff meeting. The finance committee compiles

a report on a monthly basis. The SGB meets with the parents every quarter with the aim of giving a financial report and other things that might need reporting. At the end of the year, we give and explain the budget in an annual general meeting. The audited financial statements are reported to the parents at the beginning of the year and submitted to the district by June of every year.

Discussion

It appears from the findings of this study that school governing bodies do experience immense challenges regarding financial accountability and while not representative of the population of school governing bodies in the Gauteng Province, the findings provide some important insights into challenges governing bodies have to contend with at schools.

It seems that schools do prepare budgets. However, it seems, in some cases, as if the manner of drawing up budgets lacks transparency. Firstly, this may be due to a number of reasons. It may be because school governing bodies lack the capacity to prepare budgets and, ultimately, the task remains with the principal to take over. In this regard, Mestry and Naidoo (2009) point out that when considering the time and input needed for the phases of the budget process, the skills and disposition of the members become even more important because they have to be able to complete the preliminary analysis phase, in which they examine the likely level of funding, learner enrolment, prices and any other major financial commitments.

Secondly, this might also be caused by the fact that, for monitoring and control purposes, these are submitted to the Department of Education, and as a result, the concern becomes more about submission than addressing the needs of the schools, as evidenced by the Head Office official who noted that the same items appeared in one school's budget, with the same money allocation as the previous year. This clearly indicates that there is a disjuncture between budgets drawn and presented to stakeholders, and the needs of the school as reflected in school budgets.

Adhering to the budget is not always possible, because budgets, by their very nature, are planning tools and not necessarily accounting tools (Niemann, 2002). However, large deviations which are unauthorised are not advisable in terms of principles of accounting and good practice. It is clear from some

responses that, this is an occurrence in some schools. The remark that "even if we want to stick to the budget, the principal would bring issues that were not budgeted for" attests to regular deviations. Expenditure in terms of the budget is actually a financial control function. This seems to present challenges to schools. While some schools reportedly adhere to correct procedures where expenditure is concerned, some schools seem to face problems. The fact that some expenditure is actually not budgeted for and that the planning that was done jointly is changed anytime and anyhow, indicate that there are challenges. This is clearly not permitted unless approved by the Department of Education (Gauteng Department of Education, 2009) and can make it difficult for schools to deliver on their mandate of being accountable. The notion that there are possibilities of fraud and manipulation of financial statements, raises serious concern. Besides being illegal and criminal, this limits schools from exercising their financial expenditure to the benefit of learners.

While some schools seemed to be doing well in terms of internal financial control as evidenced by financial records being kept up to date, regular reports being given to the school governing body, educators and parents, as well as documentation of all the deviations and accounting to the school governing body, which are examples of good practice in financial monitoring and accountability in general, it was clear that other schools did not exercise this function. As indicated by remarks like: "... we are not involved"; "there is no transparency"; "it is just a formality" attest to the poor state of financial monitoring at some schools.

These findings have serious implications regarding financial accountability at schools. Prime among these implications, is the fact that financial accountability requires specialised knowledge and or skills in financial management and school governing bodies are not succeeding in this function. Accounts from participants indicate challenges pertaining to such aspects as financial budgeting and reporting. Clearly, training in financial management and accountability process seems less than adequate, which is confirmatory of the Mestry (2004) and Bush *et al.* (2006) assertions on poor and/or lack of training for school governors. In this regard and going by the accounts gleaned from the literature review and those proffered by participants in this study, one could boldly venture to say this challenge pertains to principals as well.

Accounts from the participants also indicate that budgeting processes are not necessarily authentic, but are done for purposes of compliance with departmental requirements. The Head Office official's assertions attest to this. Clearly, reference to lack of transparency and non-involvement of some

governors in financial accountability processes imply unplanned and unauthorised expenditure and point to less than reliable accountability processes. Furthermore, accounts from participants indicate that, due to the specialised skills and knowledge for executing financial accountability, there is a blame-apportionment 'game' being played. Parents are blamed for lack of knowledge, principals are blamed for being domineering and individualistic, and educators are blamed for wanting to get their own way. A deeper analysis of this blame apportionment indicates clearly that school governing body members have to deal with aspects of financial accountability at which they are not competent, which is compounded by the indescribable and seemingly inefficient role of departmental officials charged with developing and supporting schools based on their reliance on reports and not hands-on development and support.

Recommendations

The apportionment of blame among governors and departmental officials seems to imply difficulties experienced by school governors in executing their roles, in this case, financial accountability. However, the implications of the findings seem to relate to the very core of legislation that provides for school governing bodies' functions. Firstly, there is a need for the Schools Act to be reviewed or amended in terms of which roles and functions are prescribed for school governing bodies and how they are. It is clear that some functions require specialised knowledge and skills. The Schools Act should be reviewed to look at which functions are specialised and who should perform such functions. For example, the execution of functions like financial management and accountability require functionaries with accounting qualifications and skills, especially since schools are receiving massive funding from the state. This might necessitate the appointment of functionaries qualified as accountants for this responsibility at schools.

Secondly, the terms of office of school governing body members need to be reviewed. Assuming that training as prescribed by the Schools Act does take place initially and perhaps continuously before governing body members have gained enough capacity and/or have just begun to, the three-year term is over and new members are elected, basically on their campaigning strategies. A new cycle of capacity-building thus begins. Continuity is therefore lost on the 'promises' election campaigns are usually notorious for. Instead, the benefits of principals who quite clearly seem to know more about governance than

other members, is worth looking at. The fact that they are permanent members of school governing bodies, as it were, implies that they receive continuous development. Therefore, it could be beneficial for some or even all functionaries of the school governing body to be allowed to run for at least two terms, so as to ensure continuity and full utilisation of capacity gained during the initial years as functionaries in the school governing body.

Thirdly, the role of district and provincial development and support functionaries needs to be enhanced. The fact that IDSOs seemed not to know how schools were doing their financial planning and reporting, sheds some light onto the reasons for schools not being able to implement what they were trained to do. It might be that officials themselves lack capacity to develop, support and monitor school functions. Therefore capacity-building seems a necessary aspect even for departmental officials in terms of, *inter alia*, monitoring skills, document study and trend analyses to identify weaknesses and areas needing support.

Finally, the department of education should have a system of feeding information to its various units for purposes of supporting schools. Though not mentioned in this report, in off-the-record discussions, it was mentioned that principals and school finance officers in many instances, had been investigated for misconduct in terms of mismanagement and misappropriation of finances. The units in charge of such process should conduct trend analyses of such cases, identify gaps and feed this information to units that are responsible for governance support and development.

Conclusion

This study has revealed the challenges pertaining to financial accountability at schools as accounted by educator-governors and departmental officials involved in school governance through oversight, monitoring and support. While accounts generally indicate financial accountability as a challenge for school governing bodies, it can be deduced that the challenges emanate from the challenging nature of prescribed functions in the Schools Act. The research, however, was limited by some factors. Firstly, the scope of this research did not include principals, parents and learners (at secondary schools). Their views could have enriched the data collected. This implies the need for further research. Secondly, the data collected pertains only to historically disadvantaged schools. The inclusion of former ex-Model C

schools could provide a basis for comparative analysis. Thirdly, the views expressed by the Head Office official did not necessarily pertain to specific schools or districts, but gave a general impression pertaining to financial accountability challenges faced by school governing bodies from the perspective of a monitoring function of the department. These factors, however, open up a scope for further research in these areas.

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Investigating policy at a practical level: challenges in translating the new curriculum for teachers in South Africa

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Abstract

The paper examines support materials available to teachers of English First Additional Language [Grade Seven] in South African schools. Firstly, by identifying the outcomes expected from teachers and secondly, by trying to establish how teachers' guides for prescribed textbooks model translation of the National Curriculum Statement (NCS) into teaching activities. We draw on amongst others, Halliday, Janks and Bernstein, to identify what is crucial to the meanings conveyed in these texts. We argue that the language used seems to be compromising the promotion of an awareness that is likely to make the NCS realisable. In conclusion, the paper highlights the implications of the responsibility of authors as policy mediators and teacher developers.

Introduction

The South African Council for Educators (SACE) has stated that more than a third of teachers in state schools (over 120 000 teachers) are either unqualified or under-qualified, have outdated qualifications and of these about 25 000 have only a matriculation certificate (Sunday Times, 1 November 2009). A Department of Education [DoE] (2009) draft report, 'The Teacher Qualification Survey' states that only 18 per cent of teachers are professionally qualified graduates. The new South African Minister of Basic Education's task team has now recommended that priority be given (amongst others) to English as first additional language to improve the apparent literacy problem amongst them. These recommendations were made after consultation with teachers in interviews and online responses (Sunday Times, 4 October 2009). The minister has also expressed concern that what 'should be' (policy) is made unachievable by what 'is' (the reality of the classroom). As Mattson and Harley (2002, pp.284, 286) have argued failure to understand the origins of this mismatch is caused by an inability to recognise how much teachers have to break away from the past:

South African education policy . . . fails to recognise the shift to an organic model of solidarity as a fundamental dislocation with the past.

This is a challenge that seems to be faced also by those who are required to guide and clarify for teachers what is essential for such a dislocation. The challenge for authors of curriculum support materials is to assist teachers to develop a critical disposition and acquire the pedagogical skills that are necessary for them to make this shift and implement the prescribed learning outcomes (LOs) and assessment standards (ASs) successfully. It is important that the texts that are prepared to specifically support teachers in their classroom work be written in ways that raise awareness of what it is necessary to do to provide a learning environment and initiate activities that are required by policy when teaching particular content. This paper reports on a study that examines teachers' guides prepared for use by English First Additional Language teachers in the delivery of the Revised National Curriculum Statement (RNCS) now known as the National Curriculum Statement (NCS) at Grade 7 level. These are guides that accompany pupils' textbooks. We look at how the authors of these texts translated the concepts and skills teachers need to effectively implement the NCS. The aim was to establish how these support materials were providing guidance to the teachers to make the concepts and principles within the content they teach accessible to the pupils. In short, this is an interpretive inquiry that attempts to understand the suggestions made to the teachers.

We expected texts that serve as teachers' guides to convey the requirements of the NCS in such a way that the underlying concepts and principles of the content to be taught to meet the learning outcomes (LOs) are clearly understood by the teachers. This clarity is particularly important in a context of curriculum reform wherein not all teachers have the same training and qualifications and where the majority of English second language pupils are being taught by teachers for whom English is also a second language (see Crossley and Watson, 2003). These concerns provoked our interest in teachers' guides. We became interested in finding out how the guides that teachers are supposed to use are helping, or not, to equip them with the necessary pedagogical content knowledge (Shulman, 1985).

We wished to answer the following questions:

1. How did the teachers' guides convey to the teachers curriculum design principles implied in the LOs?

2. How did the authors recontextualise/model for the teachers how to teach the prescribed content?

The stance we take in this paper is that the teacher's guide cannot just provide instructions about 'what to do' for teachers but has to indicate how content can be dealt with so that it develops the requisite knowledge and skills for the pupils and subsequently, helps meet the objectives of the NCS. The role of the teachers' guide is thus to clarify the conceptual development, skills and values which the NCS expects. Helping teachers identify the implied design principles in policy and understand how they need to be translated into learning activities in lessons is crucial to the successful implementation of the NCS requirements for English First Additional Language teaching. As put by Janks (1993, p.iii):

Critical language awareness emphasises the fact that texts are constructed. Anything that has been constructed can be de-constructed. This making or unpicking of the text increases our awareness of the choices that the writer . . . has made. Every choice foregrounds what was selected and hides, silences or backgrounds what was not selected. Awareness of this prepares the reader to ask critical questions: why did the writer . . . make these choices? Whose interests do they serve? Who is empowered or disempowered by the language used?

What this implies is that the meaning potential of texts and how they are structured and positioned plays an important role in understanding a language system. A language system is thus neither neutral nor ideologically free and it gets its meaning from how it is represented. Therefore, by looking critically at how language is used and the context within which it is produced and positioned we are likely to gain a good understanding of the language system to which it belongs. According to Halliday (1970) as well, a language system has a 'common core' or internal structure which is based on its purposes.

If you are to understand how to use language such as English, you need to have an understanding of the purpose or end for which it is to be used. In this way its 'meaning potential' can then be understood (Halliday, 1970, p.360).

What then is in a word?

What's in a word?

In the light of the assertions presented above, we could argue that when learning a language you need to build up or mentally construct [construe] the common core of such a language system. At the same time you further build

up the resources which may be needed in making meaning when reading, writing, speaking or listening within the system (Halliday, 1999). Such resources may be used to 'interrogate' the unfamiliar to make meaning clear and disclose the system's intentions. Halliday is particularly interested in the relationship between a language system and a social system. As regards the relationship between language and context, Halliday (1999, p.15) asserts that "the situation is realized in the text" while "culture is realized in the linguistic system" and describes this as a semiotic relationship between "interlocking systems of meaning". These situational and cultural contexts influence the potential of language to be realized. Halliday (2002, p.2-4) considers this social process of meaning making a "semiotic cycle". Therefore to understand situational texts, attention should be paid to the language system underpinning a culture that is associated with its context and to the patterns of language underpinning the situation as what reflects its internal structure and purpose and position in a context. Halliday's system of functional linguistics therefore helps us to look at how language is structured and used in the transmission and conveyance of meaning.

The choice of words used in a text or discourse is not arbitrary. Rather, the way that a word is used points to a deliberate selection process concerning "lexical, grammatical and sequencing choices in order to say what they want to say" (Janks, 2005, p.97). By looking at the how words are used, we are better able to interpret the intentions and motives behind their selection. Halliday (1999, p.7) doesn't limit text to just the written word but rather as "all instances of language that you listen to and read, and that you produce yourself in speaking and writing". As explained by Janks (2005, p.97) too:

All these selections are motivated; they are designed to convey particular meanings in particular ways and to have particular effects. . . . they are designed to be believed.

If a text is designed in order to be believed, then it is important to examine the way words are selected, the way the reader is positioned and the way it is designed to uncover its specific intention. Thus, close attention should be paid to this selection. We need to ask: 'How is the reader being positioned here?' 'How is the writer positioned or what is the writer's perspective here?' In short, what is present in a text points to not only what is absent but also what could have been there.

Therefore grammar is a "theory of meaning in context" (Janks, 2005, p.100). If the meaning of grammar is derived from the *context* in which it is used, then the latter affects whether its meaning potential is realised, or not. Context not

only affects what we say but what we say will also be affected by the context within which the discourse is situated. This is the case because within a society people are socialised into learning how to use text or discourse to exchange meaning amongst themselves within a particular context.

However, according to Halliday (1999, p.10) the 'context of situation' should not be equated to the setting but rather that:

The context of the situation is a theoretical construct for explaining how a text relates to the social processes within which it is located.

This 'context of situation' has three parts: the field (what's happening or the social activity), the *tenor* (the people involved, their roles and relationships) and the *mode* (the role/function of language/text). In the context of this paper, for authors of teachers' guides, the context of the situation for which they are writing would be the NCS (institution). Within this institutional framework authors operate within the 'field' of education as a social practice. Here their relationship with teachers (tenor) is to assist them to develop a systematic official knowledge of English First Additional language (mode) as distinct from the everyday form of the language which they may have learnt from other exposure within the context of their society. Authors are involved in a process of recontextualising the requirements of the NCS for teachers through the activities they have devised for the pupils in the textbooks.

Therefore, it is important to state that we are not reporting about textbooks and their design but rather look at how teachers are helped to understand why the texts are structured as they are to help them position pupils in a particular manner. It is the responsibility of authors to help teachers to better understand how these textbooks are a response to the requirements of policy and are therefore modelling the translation of the NCS.

In the next section we look at the competences that are expected of pupils in the Senior Phase. Specifically, we gave attention to Grade 7 and focused on English First Additional Language. We worked at this level of schooling as it is a bridge between primary and secondary schooling. We considered it important to focus on this critical stage of the learners' transition into the Senior Secondary Phase, when English becomes a language of instruction for many.

The NCS and English first additional language Grade 7

Each subject included in the NCS has its own Learning Outcomes (LOs) and Assessment Standards (ASs) for each grade. A learning outcome describes what students should know (knowledge, skills and values) and what they should be able to do (competence) in each grade. Assessment Standards describe the minimum level of what students should know and demonstrate to achieve the learning outcomes in each grade. The grades are divided into Foundation Phase (Grades 1–3), Intermediate Phase (Grades 4–6), Senior Phase (Grades 7–9) and Further Education and Training Phase (Grades 10–12). In South Africa, although Grade 7 is in the Senior Phase it is usually incorporated into the intermediate or primary school phase.

The six learning outcomes highlighted by policy as competences are listening, speaking, reading, writing, thinking and reasoning, language structure and use. (See Fig. 1)

In the Senior Phase it is expected that learning which has occurred in the foundation and intermediate phases will be consolidated and reinforced; language and literacy will be extended; and students will be prepared for further education and a career in the world of work. Life skills and study skills are emphasised. Thus it is expected that by the end of this phase, students will be able to use language with greater independence for reasoning, debating important issues, finding out career and further learning opportunities and to be knowledgeable about the rights and responsibilities of democratic citizenship. An important shift in the intermediate and senior phases is that English has become the language of learning. Now instead of learning to read, students have to *read to learn*. The learning outcomes therefore focus on the raising of a certain consciousness to facilitate this transition and a high level of competency is required.

Listening skills are assessed through pupils' responses to stories, oral texts, and specific information. The teacher looks specifically for understanding and the ability to use information in other ways such as retelling of stories.

Since pupils need to learn to *speak* with confidence and clarity much opportunity, encouragement and support is required so that they can learn to speak with fluency and expression.

At this level, pupils should also be able to read for different purposes; have developed an appropriate reading speed; use techniques such as skimming, scanning, and summarising of texts; use different reference sources such as dictionaries to access information; and critically examine texts. They should be able to read for pleasure, read for understanding and read for information using various reading strategies. A reading vocabulary of 4 000 to 5 500 common words is expected at this level. Pupils are also expected to write texts for different purposes.

Thinking and reasoning skills are developed to enable pupils to use English for learning across the curriculum. Proficiency in this area will help them to access information and use language and literacy in other subjects for oral, written and thinking purposes.

A good knowledge of grammar and vocabulary is seen to promote fluency in reading, writing and speaking.

By the end of the Senior Phase, students should be able to read fluently with more independence, write for a wide range of purposes, have developed good listening skills, speak English with confidence, and understand 5 000 to 7 500 common spoken words.

The NCS presupposes that teachers have the necessary skills for this level of language development.

Thus, any initiative aimed at providing support to teachers expected to deliver the NCS has to provide *cues* about what is necessary to identify competences to be developed. Specifically, in South Africa such cues are mainly needed by teachers who were deliberately exposed to inadequate education and are thus not as skilled as those who have had a more privileged education. However, researchers in the country are concerned that the re-skilling of teachers is occurring in a context that is "characterised by sophisticated policy reform within a context of difficult educational and social circumstances" (Robinson, 2003, p.22). There is a concern with how teachers are expected to make sense of what defines their role because of the different ideological bases and cultures which positioned them differently as regards their economic, social, cultural and professional backgrounds (see also Modiba and Van Rensburg 2009 on Arts and Culture education).

Although it is widely recognised that textbook authors write mainly for pupils because of the assumption that "textbooks can be used almost independently

of teachers by pupils" (Dow, 1991), the textbook and teacher's guide both have the potential to play a valuable role in curriculum reform and teacher development. For example, Cohen, Raudenbush and Ball (2003) and Doyle (1992) have argued that the usability of curriculum materials by both teachers and students and knowledge of how to use them has a direct effect on learning. Resources that are 'unusable' or outside the capabilities of students and teachers are ineffectual to learning if they do not take into account the interactive role played by teachers, students and materials in the classroom. Thus, authors have to consider the role played by teachers, pupils and materials if teachers are to act effectively as mediators of learning as expected by the NCS (see also Deng, 2007b and Tomlinson, 2003). For example, Tomlinson (2003, p.138) asserts that there

... needs to be a clear sense of the target teacher group in terms of their language ability, education, teacher-training experience, willingness to try new things and time available for preparation.

Tomlinson (2003) further suggests that the teacher's guide should have notes which are useful and explicit; there should be sufficient guidance; answer keys, vocabulary lists, structural/functional inventories, a description of the unit template; mini lesson plans, extension activities and photocopiable materials; and a rationale and lesson summaries should be included. Also according to Ball and Cohen (1996), guides could offer examples of pupils' work, suggestions on different ways to represent ideas and connections between them, and help teachers with the planning of the course work. They should assist teachers in learning about their pupils, their teaching and their subject.

Ball and Cohen suggest that the ideas and concepts involved in learning activities should be elaborated so that teachers have a better idea of what they can do with the content and what possible responses and ideas might emanate from their students. The provision of concrete examples of the type of work expected, student understanding and thinking and what other teachers have done, would thus be of assistance to teachers' learning and practices. While allowance should be made for teacher autonomy, creativity, different teaching styles and personalities, the pedagogical practices and concepts implicit in the curriculum need to be explicitly illustrated and communicated to teachers for them to understand how content has been recontextualised to meet the requirements of policy.

Speaking the language of recontextualisation we found Bernstein's work on the transformation of knowledge useful. It provides an invaluable conceptual lens to examine how authors recontextualised content for readers.

Bernstein and the recontextualisation of knowledge

According to Bernstein, recontextualisation rules are located in the pedagogic device and refer to the process whereby educational knowledge is relocated from one site to another. As a recontextualising tool, pedagogic discourse moves educational knowledge from its original site of production to a pedagogic site of reproduction (teacher's guide). This movement of knowledge from one educational site to another creates a *space* in which changes in power, control and ideology can take place. This affects the selection, organisation, transmission and acquisition of knowledge (see also Singh, 1997). In this way, Bernstein (1996, p. 33) says the discourse is transformed from "an actual discourse" to "an imaginary discourse". Thus the recontextualising principle creates a recontextualising field with recontextualising agents. Recontextualising agents select from the knowledge and practices available in the field of production in a non-arbitrary manner governed by what Bernstein (1996; 2000) calls 'social facts', i.e. contexts etc. In this way, the recontextualising principle controls the *what* (subject content) and the how (theory of instruction) of the transformation of knowledge. The recontextualising rules located in the pedagogic device were therefore of particular interest to us since they constitute and regulate the construction of a particular pedagogic discourse.

Bernstein (1996, p.32) locates two opposing dichotomies within this recontextualising rule namely the instructional discourse (ID) that is embedded within the regulative discourse (RD). He represents the relationship between these discourses diagrammatically as follows.

> <u>Instructional Discourse ID</u> Regulative Discourse RD RD

For him, the regulative discourse (RD) is a moral discourse of social order and reflects the values of society. Regulative rules define the relationship between the authors and teachers, teachers and pupils. The RD contains the social dispositions (attitudes, values, character, and manner) rules of conduct (appropriate behaviour) and rules of social order for how knowledge is to be

transmitted (spaces, behaviour, actions). In a school, this would be places (spaces) where teachers and pupils can go, how they should behave and what they have to do (see also Morais, 2002). The regulative discourse (social order) is the dominant discourse that (Singh, 1997, p.124–125) sees as:

... constitut[ing] the social division of labour for knowledge production, transmission and acquisition. Consequently the RD sets the limits and possibilities for what is thinkable and unthinkable in relation to school knowledge, student and teacher identities and classroom order.

The *instructional discourse* is a discourse of competence and refers to *what* is to be transmitted. This would be knowledge content, cognitive competences, skills and the rules of sequencing and pacing which control the rate at which knowledge transmission is to progress. This transmission of the required competences is in turn controlled by the regulative discourse. However, since order in the instructional discourse is generated by the regulative discourse, the regulative discourse can be said to comprise all order within the pedagogic discourse.

Because one discourse is embedded in the other, the regulative discourse is the dominant discourse and therefore there is only one text, one discourse. Bernstein (1996, p.46) explains:

Often people in schools and classrooms make a distinction between what they call transmission of skills and the transmission of values. These are always kept apart as if there were a conspiracy to disguise the fact that there is only one discourse. In my opinion there is only one discourse, not two, because the secret voice of this discourse is to disguise the fact that there is only one.

We drew on the insights discussed above and examined the texts to clarify how their authors, as controllers of what Bernstein calls the potential discursive gap, created the spaces in which the teachers were provided with cues on what they should do (RD) when teaching specific English First Additional Language content. This content is what Bernstein refers to as defining what is to be taught (ID). In this regard, issues of equity, social justice and access were invaluable as they were filtered through texts to establish how, or not, they promoted the ideals that underpinned the NCS.

We were interested to see what authors were doing when they recontextualised the NCS for teachers. How they clarified for the teachers the choice of what (we assumed) they considered the appropriate manner of teaching made them agents of recontextualisation. In this role they had to select the content they used in the teachers' guides from a variety of knowledge bases: expertise as

policy analysts, subject knowledge, pedagogical content knowledge and knowledge of teachers and learners. If we follow Bernstein's line of thinking then what authors should therefore be doing is providing to the teachers both the RD and ID as to what is underpinning the NCS.

In other words, if we look at the teachers' guides as providing ID and RD then besides *what* is required by the NCS with regard to the English curriculum, authors needed to consider *how* the English language content, selection, relations (teacher and pupil), sequence and pace are to be regulated in the classroom. It is on this basis that they had to know how English First Additional Language learning had to occur and the sort of identity that had to be promoted by positioning teachers and pupils in a particular manner with the context of the lesson.

Looking at the guides we had to give attention to how they structured the following:

- 1. Provide the content (what) and the theory of instruction (how).
- 2. Provide information which will enable teachers/learners to understand what is required of them.
- 3. Clarify to teachers the necessary skills required to perform the activities prescribed.
- 4. Clarify to teachers the reasons for doing what is suggested so that they can communicate effectively as English First Additional Language teachers.
- 5. Model the sequencing and pacing of activities so that the rate at which transmission is to progress is clear to the teacher.
- 6. Explain what manner, behaviour, conduct is expected of teachers and pupils.
- 7. Indicate the classroom organisation necessary.
- 8. Indicate and clarify the necessary teacher/pupils interactions in the classroom e.g. whether teacher or pupils are in control of the learning process.

In short, with insights drawn from amongst others Janks, Halliday and Bernstein, we believe that if teachers and authors are to be seen as *partners in practice* then, instead of seeing the textbook as only for the students and the teachers' guide as only an instructional manual for teachers, *both* should be used as sites for teacher learning. (See Figures 3–6)

In the next section we describe how we explored the language authors used to structure guidance for teachers.

Putting words into practice: tools used

Using a qualitative research approach allowed us to gather data in multiple ways, pursue issues in depth through probing, and to see the 'human face' behind the designing of teachers' guides. As instruments of data collection we were able to conduct our research in a natural setting (authors' homes or offices) and construct a detailed picture that in turn allowed us to have a better understanding of the issue concerned (Creswell, 1998). Our aim was to try to "makes sense of things or interpret phenomena in terms of the meaning people bring to them" (Denzin and Lincoln, 1994, p.2).

We chose a *single case study design* to examine how a small group of authors designed their textbooks and teachers' guides and used language to recontextualise the NCS for Grade 7 English teachers for the following reasons. It is an empirical inquiry (Yin, 2009; Bassey, 1992) of a unique 'bounded system' (Dockrell and Hamilton, 1980; Stake, 1995) and 'contemporary phenomenon within a real-life context' (Yin, 2009) which we wanted to understand in depth. A case study design enabled us to use interviews and document analysis to discover what actually occurred when authors designed these textbooks and teachers' guides and what they experienced as 'a single lived event' (McCaslin and Scott, 2003). Through the case study we hoped to answer questions about the effectiveness of the teachers' guides in helping teachers of English First Additional Language to mediate the textbook to pupils.

To reflect on this recontextualisation and gain a clearer understanding of why the texts were written as they were (Yin, 1994), we examined the textbooks and teachers' guides and then conducted interviews with three authors of textbook A, thus making data gathering ex post facto. We needed to look at how the contents and the organisation of the texts clarified the activities that would ensure the successful implementation of the NCS. How did the materials help teachers recognise and realise what they needed to know and do to fulfil the requirements of the NCS? The literature on language acquisition (Halliday, 1970; Janks, 2005) seems to isolate these as important to look at when trying to understand and establish the value of texts. Therefore, in this study close attention was paid to examples of meaning making, context and recontextualised knowledge as a way of positioning teachers.

To establish how the contents of the texts studied here conveyed messages that were empowering or disempowering to the teachers (cf. Janks, 1993) an analysis of each *interview* was done through *paraphrasing* the transcriptions to highlight the words, phrases and sentences used by each author to refer to issues she considered important to teacher learning. Words related to policy requirements, the teacher's guide and teacher learning were highlighted as signalling views authors held with regard to the role teachers were to play in their own development. We were looking particularly for evidence related to how the authors constructed a context for teacher learning. Explanations they provided reflected the role they assigned to themselves as teacher developers. Also how the texts were prepared and organised demonstrated the allocation of authority to both themselves and teachers. Curriculum design principles that were foregrounded to teach specific content reflected how authors guided teachers as regards what to do with such content when teaching.

We looked at the data obtained from interviews as speech acts which we needed to examine to clarify the use of language in a social context. By looking beyond the sentences, the interactive nature of dialogue or everyday communication, the relationship between language and society that teachers were helped to develop had to be explained. For example, if we look at how one author communicates with the teacher the relationship role is an unequal one where the author is the authority giving the teacher instructions: 'Find out what learners know about praise poems and get the learners to discuss what they know in groups.'

For us, grammatical choices and social relationships are rooted in issues of social justice and had to "expose to scrutiny . . . claims that the way things are is the way they have to be" (Fairclough, Graham, Lemke and Wodak, 2004, p.1, 2). We found Fairclough's (1992) textually oriented form of discourse analysis useful as it raises important social issues and argues that there is a relationship between language, power and ideology, how this is represented in texts and how people think about their world. It is a form of analysis that looks at the ideology and value systems within the language of a text and as such aims to provide social criticism which is based on linguistic evidence. We drew on Fairclough's (1989) three-dimensional framework to describe the textual analysis (e.g. verb and noun usage, mood etc.), the discursive practice (how authors transformed texts) and the socio-cultural practices (issues of power) which emerged in our data. Fairclough sees text, social interaction and social context as three elements of discourse. We were looking in particular at how discourse characterised the relationship between authors and teachers i.e. the nature of their relationship and how it was expressed in what they said. In

other words, the linguistic selections, positioning and sequencing that were provided to teachers had to clarify (Fairclough, 2001) the nature of the relationship between the authors and the teachers.

Sampling was purposeful and convenient. As a small sample the four texts and three authors, provided rich information and insights (Patton, 2002) without necessarily allowing a generalisation to a larger population since you can't always "extrapolate findings from one population to another" (Bassey, 1992, p. 13). The sample was convenient since its selection of authors was based on locality, experience, work produced and proximity to the researchers. The authors are all female and between the ages of forty and sixty-five. In this study specifically it was crucial that some of the authors be able to reflect on those aspects that they would normally have taken for granted pre-democracy. Therefore, relying on interviews as other sources of evidence provided data that we drew on to establish how our reading of the texts and what the authors said about the contents of these texts and the processes of producing them converged, or not. Semi-structured interviews were used as this allowed for flexibility to adapt the wording and sequencing of the questions according to the direction and emphasis the interview adopted. Through probing, more information or clarity on an issue was elicited. Detailed descriptions were obtained of the design process as experienced by each individual author and clarity on the choices that informed the production of the texts.

Underlying the process was the notion that learning is a social construction which results from interaction with the text and its social context as described by Halliday, Fairclough and Janks. Drawing on insights provided by these authors, the assumption was that the authors of teachers' guides did not select the material which they used in these texts arbitrarily. Authors made their choices in a manner that helped position teachers by creating a context in which they could practice what facilitated the implementation of the NCS. In short, we were interested in how the selection and organisation of content took cognisance of the needs of the teachers who would be using this material. How these materials provide teachers with professional support in a climate of reform has become an important question in curriculum research (cf. Tomlinson and Ball and Cohen). By probing the ways in which authors produced their texts it was possible to determine or not whether they aimed at recontextualising the NCS for teachers.

We examined four teachers' guides accompanying the selected Grade 7 textbooks. They were amongst the ten most popular sold [according to educational booksellers consulted locally about book sales], published post

1994, prescribed by the Gauteng Department of Education [GDE] and written in the time period of the new curriculum (see Figure 7).

While language style or form are significant and give access to content in a subtle way, this was not the primary aim when looking at these texts. Rather we were more interested in the style and form – as the *what or representation* – of the content of lessons and the *way it was* communicated – discourse – to promote teaching and learning. Also important to the analysis were the power relations suggested by the way the teacher is positioned and empowered by the authors' choice and organisation of words in the teacher's guide as support material for clarifying the textbook written for the pupils.

The table in Fig. 2 provides a snapshot of what we looked for when analysing extracts from the teachers' guides.

Following Fairclough (2001) and (Janks, 2005) we posed the question 'What relational values do textual features have?' to help examine the notion of relationships that authors had in mind when preparing the teachers' guide. According to Halliday (1985, p.xvii):

A discourse analysis that is not based on grammar, is not an analysis at all, but simply a running commentary on a text: either an appeal has to be made to some set of non-linguistic conventions or linguistic features like the number of words per sentence . . . or else he exercise remains a private one in which one explanation is as good or as bad as another.

Therefore, we looked at relational values of language features such as pronouns (we, you, they, them), in/definite articles (a, the), active/passive voice, mood etc to see how they were used by authors.

From the table in Fig. 2 we can see that texts are written in the *present tense* which denotes "timeless truths and absolute certainty" Janks (2005, p.101–102). The *mood* is captured through statements, commands or questions. Statements are used to provide information. Thus, in a text underscoring partnership as a basis for professional development we would expect more statements rather than *commands* (cf. Tomlinson and Ball and Cohen). Sentences that are in the *active voice* position authors as *doers* and teachers as *done-tos* Janks (2005).

In particular we gave attention to the use of *you* or *we* to address teachers. For us, the relational value of *you* as 'teachers in general' implies that the authors' practices and perceptions are in solidarity with teachers and that they assumed a common understanding of how content was to be recontextualised to

facilitate meaningful learning. The relational value of we may be to represent authors and teachers as being similarly positioned but we need to ask who is actually in control. What we found was that the authors mainly addressed the pupils as can be seen by the more frequent occurrence of 'learners, they, their and them' as opposed to 'you or we'. This orientation of vocabulary towards the pupils indicated to us that the authors, wittingly or not, saw themselves as being in control of the learning process.

The definite article *the* as argued by Janks (2005) is not neutral and is used to indicate shared information or something that both authors and teachers know about. On the other hand, the indefinite article 'a' refers to the introduction of new information and presupposes that information is *not shared*. Janks calls this assumption of shared knowledge 'textual presuppositions'.

Let's take a closer look at the following texts to further elaborate on the information provided in this table.

Teacher's guide A (Unit 5, pp.68-69 activity 6: Writing a praise poem).

'A praise poem' is an individual activity and addresses LO4 and AS 'writes creatively'. This activity is preceded by other activities where learners read information on ball games, the language of ball sports, David Beckham, advertising, brainstorming an exhibition, the origins of soccer, the Aztecs and Mayans as the first soccer players and their god of ball games called Xochipilli. This is what the pupil is told to do: 'Imagine that you are a ball player who is about to play an important match. You do not want your team to lose! Write a praise poem to the god Xochipilli.'

In the teacher's guide, the information provided for this activity is that this activity addresses LO4 and AS4: the learner writes creatively; shows development in the ability to write stories, poems and play-scripts. The teaching tips are:

Find out what learners know about praise poems and get the learners to discuss what they know in groups. After about ten minutes, one person from each group can stand up and tell the rest of the class what their group's definition of a praise poem is, and provides examples. Each group should have no more than three minutes to report back. Based on all the group presentations, the whole class can discuss and decide on what they think would make a good praise poem. Write down the agreed criteria on the board. Then let learners read or perform their praise poems to the rest of the class at the end of each lesson for the next week or so.

The task is to be assessed using the following criteria:

The learner takes part in defining a praise poem and establishing criteria for this definition; applies these criteria to the writing of a praise poem; assesses work and edits where necessary.

The scale provided to measure the criteria is a rating of 1–4.

What struck us immediately was that neither the teacher nor the pupil was provided with an example of a praise poem. The assumption is that all pupils and their teachers know what a praise poem is yet in the text the author uses the indefinite article for 'a good praise poem' which indicates that this is new information (Janks, 2005). We would have expected the guide to provide cues to important aspects expected when writing this type of poem such as figures of speech, rhyme, descriptive/emotional language and stanzas. This is expected at Grade 7 level even for second language learners. But authors, failed to do this. Pupils and teachers [many of whom are second language speakers themselves] were expected to know that these aspects needed to be included in the poems. It was in discussion that writer A realised and commented on this omission as follows:

Let's just randomly look at one of the teaching tips. Let's see what they say in the teacher's guide to support the teacher. Activity 6. [we looked at the guide] Now you see where this falls short? It doesn't actually give the criteria.

She then went on to say:

So I would say that that's a shortcoming, because it assumes that between the teacher and the learners they will be able to come up with a satisfactory set of criteria. . . But they also need to know, they need an example of a praise poem.

What is evident here is that upon reflection of the task and the information provided, this designer was then able to see the shortcomings in the textbook and teacher's guide for this particular activity. Author B had said this about the teacher's guide:

There's a teacher's guide, which is absolutely addressed to the teacher . . . giving teachers guidance and working with teachers own resources on how they can develop and extend stuff in relation to the learners' book.

Looking firstly at the textbook that was to be used, we would argue that there is an assumption that the pupils can make meaning about a text unrelated to their own context and involving content from other countries and peoples such

as the Aztecs and Mayans (cf. Bernstein). There is little consideration given to the reader's own context or that of his/her community e.g. use of traditional praise poems from their own culture. It was also taken for granted that each pupil would know what a praise poem is and is knowledgeable about the criteria for writing such a poem.

The section related to this activity in the teachers' guide was mainly made up of commands e.g. 'Read through the instructions with the children'. The text is positioning the teacher as a subordinate, carrying out the instructions of the author. Drawing on Tomlinson (2003) we expected authors to inform the teacher of the pedagogical principles or framework that were to guide the lesson. Also, principles that were to be transformed into teaching practices ought to have been explicit and transparent (Bernstein, 1996). The positioning of the teacher here ignores the interactive relationship between teacher, learner and curriculum materials as context for teacher learning. Instead there appears to be the assumption that the curriculum materials can operate independently of this context (see Dow, 1991; Ball and Cohen, 1996). In Fig. 2 we find examples of this positioning in texts examined here. We noted the frequent use of terms used to address pupils such as them, their, they, learners while the author seldom uses pronouns such as you or we to address the teacher directly. The pronouns we and you indicate the relationship between authors and teachers in the text. Since we and you signify solidarity and a commonality of experience their absence implies that authors see themselves in authority and not as sharing experiences with teachers.

Sentences are in the active voice which positions authors as *doers* and teachers as *done-tos* (Janks, 2005). Thus while the teacher is positioned as sharing a common understanding with authors with regard to e.g. a praise poem, the tone and register used still positions authors as in authority. The use of the definite article *the* indicates an assumption of shared information or something that teachers should know about. 'The' is used 12 times. On the other hand, the indefinite article 'a' which presupposes information is *not shared* is used 3 times. This is ironic since it is presupposed that teachers and pupils know what a praise poem is (they are not given an example) and are expected to draw up criteria for it. This view of the teacher as practitioner is reflected in how Author A describes the role of the teacher:

You're obviously assuming that the teacher is going to be the manager of the situation and assessing and overseeing and mentoring the learner.

Also, if support materials were to be of value, they should have provided sufficient guidance, useful and clear notes, a rationale, lesson summaries and

cater for different teaching styles (Ball and Cohen, 1996). This had not been implemented here. Although Author B was aware that there might be a lack of capacity at classroom level, she did not specifically provide for teacher learning in her materials since it was her perception that the textbook and the teacher's guide represented a partnership between herself as the controller in the Bernstein sense, and the teacher as the implementer or practioner. She assumed that by following the textbook and teacher's guide, the teacher would be able to overcome these shortcomings.

You're helping them to, through the medium of this book to teach the outcomes and to teach, as you say, you are focused on the curriculum, so you are very aware of the outcomes. So you're helping them, you're partnering them in this teaching.

Despite Author A's belief that teachers hadn't been provided with the tools to replace teacher centred practices and that the textbook couldn't do a lot about changing a teacher's style as this depended on the teacher's own frame of mind, she did not consider teacher learning necessary when writing the materials.

And I think that's all very well and good but the problem is that it (NCS) didn't take into account the skills base that we were working from in South Africa. The lack of capacity, the lack of resources. So I don't think a textbook can really do a lot about changing teacher learning style if there isn't the willingness on the part of the teacher if the teacher isn't open to the change.

Teacher's guide C (p.9. Exploring poetry: reading a praise poem).

This example also dealt with praise poems. This is from Chapter One: 'The Friendship Tree' which is described in the chapter overview in the teacher's guide as:

In this chapter learners will think about how they fit in with their family structure and their friends. They will come to appreciate their support systems and learn to value the people around them. They will interact with their classmates in a range of activities, read a poem, write letters, use pronouns, synonyms and antonyms, and draw a friendship tree.

The activity we looked at is entitled 'Exploring Poetry: Read a praise poem'. The learning outcomes and assessment standards are LO3 AS: uses reading strategies and LO3 AS: shows some understanding of how reference books work. This activity is preceded by making a friendship tree, peer assessment of friendship trees made and writing a friendly letter. The sections are headed Preparation, Key Vocabulary, Teaching Guidelines, Answers, Assessment and

Extension Activity. Teachers are asked to prepare for the activity by letting the pupils look at the friendship trees which they have made and to ask them to think about other features of trees. Then:

You [teacher] can let them brainstorm trees in groups or pairs. Encourage them to think of the benefits of trees as well as how we use the shape or structure of trees to express other things e.g. family trees. If possible have dictionaries available. Provide A4 paper and crayons or Koki pens. A list of key vocabulary found in the text is provided: pause, inventory, debt, knits, toils, heralds, beast, feast, sturdy, axe, anon. (meanings of these can be found at the back of the learner's textbook).

In a previous activity called 'Exploring activities: making a friendship tree', the teacher is told what to do for brainstorming the topic 'friendship'. Under teaching guidelines this is what the teacher is told to do:

Talk about praise poems with the class and let learners share their knowledge of praise poems. If possible read out a praise poem. Remind learners to use different strategies when they read. In this poem, for example, they will come across some words that may be unfamiliar but this should not prevent them from enjoying the poem. Encourage them to use the context [the meaning around the difficult word] to work out the probable meaning of the word. Refer learners to the HELP box on page 9 and check that they know how to use a dictionary.

Learners can continue in the same groups. At any time, you can change the composition of groups to give learners an opportunity to benefit from working with other classmates. They should share the tasks and work together to make a list. They can refer to the dictionary for the spelling of words they are not sure about. Allow some time for learners to read the lists compiled by other groups.

Assessment is in the form of informal group assessment where the teacher observes learners as they work and assesses how well they share tasks, manage their time and keep to the topic. As an extension activity learners are to look for the most common words on the different groups' lists and to try to think of a reason for this.

We noticed that the teacher was given support in the following ways:

- A praise poem is provided in the learner's textbook 'In Praise of Trees' (p.8) for the pupils to read and talk about.
- *Meanings of words* in the poem which may be unfamiliar to the pupils can be found in the glossary in the textbook in a simplified form which Gr 7 pupils can more easily understand as second language speakers.

- When asked to remind pupils about different reading strategies [which are the outcomes for the lesson/LO3] examples of three strategies are provided for the teacher: 'use the context/meaning around the word", 'refer pupils to HELP box' and 'use of dictionary'.
- When a suggestion is made regarding teaching strategies the teacher is given a reason for this e.g. 'pupils may continue in the same groups or at any time you can change the composition of the group' and is then given a reason why this should be done: 'to give learners an opportunity to benefit from working with other classmates'.
- The reasons for group work or pairs are also given: 'They should share the tasks and work together to make a list'.
- The teacher is also given suggestion about sequencing and pacing: 'Talk about praise poems with the class and let learners share their knowledge of praise poems. If possible read out a praise poem. Allow some time for learners to read the lists compiled by other groups.'

In this activity there are more statements than commands which indicate a mood of sharing where information is being provided. The use of the definite article the indicates that the writer assumes that the teacher understands what is being said e.g. 'the class, the context, the composition of groups, the tasks'. The indefinite article 'a' is used only once: 'a dictionary' which indicates any dictionary may be used. Later on 'the dictionary' is used which indicates a definite choice has been made. Also, since additional guidance is provided the text is positioning the teacher in the role of an equal rather than as a functionary carrying out commands. However, while the teacher is positioned as sharing a common understanding with authors with regard to the task the use of active voice still positions authors as in control. Authors have tried to make clear to the teacher the pedagogical principles or framework that are to guide the lesson (Tomlinson, 2003) and to be explicit and transparent so that the teacher would know what to do and why (Bernstein, 1996). The teacher is positioned in an interactive relationship with pupils and curriculum materials which would seem to indicate that authors do not assume that the curriculum materials can operate independently of this context and seem to have taken into consideration that the teacher might need clear guidelines to teach this lesson effectively. As support material this guide has provided useful guidance, a rationale [chapter overview] and caters for different teaching styles (Ball and Cohen, 1996).

Using this technique highlights the choices that have been made by the authors which Halliday, Fairclough and Janks talk about. It can be taken further if we think about the meaning of these choices within a socio-historical context. Janks (2005) suggests that we should ask the following critical questions of a text:

- 1. Whose interests are being served by this text?
- 2. Who benefits?
- 3. Who is disadvantaged?

In our study, we can also ask 'what do these choices indicate about authors' attitudes towards teachers?'

From the data collected we reflected on the extent to which teacher learning and empowerment were important considerations in the design of teachers' guides that we examined in the study. It became clear that the authors in general, did not see themselves as performing a teacher development role. They simply viewed themselves as having a responsibility to producing material that provided teachers with procedures to implement policy. They indicated a reluctance or unwillingness to involve teachers in the preparation of the support materials and the general viewpoint is that teachers lacked the general knowledge and skills to be of use to them.

What this data highlights is a concept of curriculum development that these authors hold. Teachers function as developers at the chalk face and specialists do the thinking for them.

Discussion/findings

Despite the fact that the NCS was promoting a curriculum model that assumed professional authority on the part of the teachers, the responses provided to the questions relating to the author's role as teacher developer, highlighted a lack of awareness of the paradigm shift which has occurred in South African curriculum thinking. This author (B) regarded the texts as pedagogically sound as they dealt with the different concepts, and skills required by the LOs and it was in this way that they were helping teachers develop competences. She believed that teachers would learn about the new methodologies and concepts by following the teacher's guide and textbook like a dressmaking manual.

It's like if you've got a manual and you're learning how to, how to make a dress, or how, you know, basic skills in, you know, decoupage, you know, whatever it happens to be. You have a manual in front of you and you work through it quite systematically. Embedded in that working through, the notion of that process of the working through, you are going to learn how to do something. So if you work through these books quite systematically and you deal with the issues which arise, it is going to raise all sorts of questions for you around, you know, and give you certain guidelines on how you teach certain items and take them forward.

. . .but when you write a unit of materials it's a very complex craft of integrating the right kind of text, the questions around the curriculum, the language levels of the children, what it is that you want to achieve, what your kind of conceptual understanding is of what you want to achieve.

From her response it is clear that Author B perceived her role as either filling a gap or improving the teacher's knowledge and skills through providing what to use in the classroom. She could articulate what would be accepted as an effective way of thinking but looking at the texts she produced it became clear that this was simply rhetoric. Teachers were expected to find out how to teach a unit by following instructions in the teachers' guide provided for them and instructions provided for learners in the textbook. This is inconsistent with what for example, Ball and Cohen (1996) and Tomlinson (2003) have said about taking into account the needs, capabilities and context of the teacher who has to put the textbook into practice. It is argued that an effective way to improve the overall quality of education is through strengthening teacher knowledge. However the evidence in this study points to a focus on the language development of the pupil. Even though there was sympathy in terms of the level of teachers' professional knowledge not much importance is attached to the needs of the teacher:

I think it's hard for them to find their way around all of those LOs and ASs and to know in what way they should be teaching to meet a particular aim. So it's the gap between the AS and what do you do to make it happen?

I just think that there are very few teachers who are that capable.

This author suggested that it would perhaps make sense and be better if the teacher's guide and textbook were written at the same time to ensure a correlation between the two.

... the team that is working on it are saying that you should actually write the teacher guide as you write the textbook because you know whether the questions you are asking work and the activities work.

By targeting pupils directly rather than teachers as mediators of learning, the potential to model what to do when translating the NCS into teaching activities was reduced. They were kept on the periphery. The attitude also indicated where the author thought professional authority lay when designing support materials. Teachers were seen as having less authority as participants in the curriculum design process. This technicist view of the teacher as practitioner is less likely to help develop teachers who can teach the NCS effectively.

Even though there is clear evidence of the author's attempts to unravel what the NCS implies through practice, this was not translated into devices that could help teachers understand the lessons that were given as examples. From the responses it became clear that boundaries between the role of author and teacher developer could not be blurred.

As she reiterated:

I think what you need are practical, and I don't understand why this is a problem, why can it not be possible to say teach this, teach that, without being too directive, you're still leaving a fair amount to the individual's creativity and translate [for the teacher].

This view is worrying. It is not good enough to just provide instruction of how the content can be taught. Opening up and modelling the process was what teachers needed to better understand the suggested practices themselves.

Conclusion

Although the textbooks and teachers' guides used here were published in 2005, they are currently still in use and appear on the GDE list of prescribed books for Grade 7. However, what is of concern to us is that the Minister of Basic Education has stated that 'there is no longer OBE' (Curriculum Review Process, 6 November, 2009). How will this affect present publications? Will they be remodelled without taking into account the needs and capacity of the teachers who will be using them? The minister has also stated that 'the system will provide systematic support to teachers to strengthen their teaching' and highlighted the 'importance of textbooks in curriculum delivery' in ensuring 'consistency, coverage, appropriate pacing and better quality in terms of instruction and content'. We therefore reiterate our plea for well-designed teachers' guides to support teachers in achieving this aim.

In South Africa there are competences teachers are expected to possess and utilise in implementing the NCS. Teachers need exposure to a modelling process that demonstrates to them the necessary tools and processes to be used to promote the acquisition of the needed competences. As Tomlinson (2003, p.49, 50) has argued it is important that the criteria for assessing textbooks should include the ability to encourage teacher development and "relate to the extent to which they engage the teacher's constantly evolving critical standpoint and facilitate the expanding and refining of the teacher's schemata in the process". Islam and Mares (cited in Tomlinson, 2003, p.100) writing specifically in relation to language teaching, agree and assert that:

Classroom materials need to be adapted in a principled manner to reflect needs within particular teaching contexts, current understanding of second language acquisition and good teaching practices.

But, the materials looked at here reflect an inability on the part of authors to adapt the principles of the NCS in a manner befitting the content taught. The authors (A, B, C) seemed to have a perception that by closely following the NCS procedurally its requirements would be made clear to the teachers. Since they did not see themselves as having to raise a consciousness needed by policy, it is thus reasonable to view them as having failed to make the unthinkable visible to the teachers. The materials are likely to be disempowering to these teachers as the authors have failed to see them as transformational devices. As authors who functioned with a concept of curriculum development as being outside the teachers' immediate responsibilities, they felt no obligation to explicitly state the organising key principles inherent in the text and taken for granted as only visible to people whom they assumed in biography with them. These principles had to remain invisible or unthinkable to those who in the Bernsteinian sense were outside of that *space*.

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Appendices

Figure 1: Learning outcomes and level descriptors of English first additional language

Grades 7-9 (Own emphasis to show developmental sequence of LOs)

LO 1	Listening The learner will be able to listen for information and enjoyment, and respond appropriately and critically in a wide range of situations.	LO 4	Writing The learner will be able to write different kinds of factual and imaginative texts for a wide range of purposes.
LO 2	Speaking The learner will be able to communicate confidently and effectively in spoken language in a wide range of situations.	LO 5	Thinking and Reasoning The learner will be able to use language to think and reason, as well as to access, process and use.
LO 3	Reading and Viewing The learner will be able to read and view for information and enjoyment, and respond critically to the aesthetic, cultural and emotional values in texts.	LO 6	Language Structure and Use The learner will be able to know and be able to use the sounds, words and grammar of the language to create and interpret texts.

Figure 2: Frequency table from four teachers' guides

Teachers' Guides

		A Unit 5 Pgs 68 & 69	B Unit 1 Pgs 3 & 4	C Chapter 1 Pgs 9 & 10	D Unit 1 Pgs 5–7
Mood	Statements	4	9	6	11
	Commands	5	6	11	6
	Questions	0	2	0	7
Pronouns	you	0	2	1	0
	yourself	0	1	0	0
	we	0	0	0	1
	they	3	5	9	3
	them	0	2	4	1
	their	6	2	2	1
Learner/s		6	12	8	18
Definite Article	the	12	19	20	24
Indefinite article	a	3	14	3	8
Tense		present	present	present	present
Voice		active	active	active	active

Figure 3: Teacher's guide A: unit 5 pgs 68 and 69

Instructional Discourse and Regulative Discourse Categories	Activity: Writing a praise poem LO 4: Writing AS 4: The learner writes creatively. Shows development in the ability to write stories, poems and play-scripts.			
Content (what) and theory of instruction (how) provided	No content (praise poem) provided. This activity is preceded by a reading exercise based on the origins of soccer in Central America. Instructions provided for teachers with regard to tasks and pupils.			
Information provided to assist understanding of what is required of them.	A rubric for assessment of pupils' poems is provided. The rubric assesses pupils' ability to take part in defining a praise poem and establishing criteria; applying criteria to writing; and assessing and editing of own work.			
Clarifies necessary skills required to perform activities prescribed	LO and AS provided Teachers are told that rubric is to assist them with assessment of pupils' ability to write praise poems and to see whether they have understood the criteria.			
Clarifies reasons for doing what is suggested	Pupils draw up criteria which they are to use to help them write a praise poem.			
5. Models sequencing and pacing	Teachers to begin lesson with a task that involves pupils in group discussions. One pupil from each group reports back on the group's findings to the whole class. This is followed by a whole class activity where criteria are agreed upon and drawn up for the writing of praise poems. Individual pupils then write their own praise poems. Time is allocated for each task. Group discussion – 10 minutes Report back – not longer than 3 minutes Pupils to read poems to class for next week or so afterwards.			
6. Explains manner of behaviour, conduct expected from teacher/pupils	No			
7. Indicates classroom organisation necessary	Pupils to work in groups, whole class and then individually. Teacher to assess their work using rubric provided.			
8. Indicates teacher/pupil interactions required	Teacher starts lesson and then pupils control the learning process. Teacher acts as facilitator.			

Figure 4: Teacher's guide B: unit 1 pgs 3 and 4

Instructional Discourse and Regulative Discourse Categories	Activity: Read in groups for 30 minutes LO 3: Reads a text; identifies purpose, audience and context; identifies main points. LO 3: Reads for information; follows information texts. LO 5: Uses language for thinking; asks and answers more complex questions.		
Content (what) and theory of instruction (how) provided	Article on the board game Scrabble provided for pupils to read in Learner's book pg 2 & 3. Questions to be discussed and answered in groups. Answers to questions are provided. Self-assessment rubric provided for pupil to assess how to improve own reading.		
Information provided to assist understanding of what is required of them.	Explanation given to teacher on why being able to respond to texts is integral to critical language awareness development.		
Clarifies necessary skills required to perform activities prescribed	Development of a reading skill/strategy such as prediction provides a context for pupils to help them to interpret what they read.		
4. Clarifies reasons for doing what is suggested	Prediction is important for developing comprehension skills and how illustrations and titles can be used for predicting what the story is about. Therefore pupils should look at these first before reading the story.		
5. Models sequencing and pacing	Teachers to begin lesson with pupils looking at illustrations and title of story. Pupils to use these to predict what the story is about. Teacher to show Scrabble Board game to class if possible. Teacher or skilled reader in each group to read the story aloud. Questions to be discussed in groups. Pupils to do a self-assessment of reading skills. 30 minutes for whole lesson.		
6. Explains manner of behaviour, conduct expected from teacher/pupils	In the self-assessment task in the LB [pg.3] conduct expected from pupils is indicated e.g. 'be honest with yourself' while for the same task in the TG [Pg 4] teachers are told to get pupils to answer as accurately as possible and encourage pupils to identify reading skill they find most difficult.		
7. Indicates classroom organisation necessary	Pupils to work in groups. Pupils to assess their work using rubric provided in LB.		
8. Indicates teacher/pupil interactions required	Teacher starts lesson and then pupils control the learning process. Teacher acts as facilitator.		

Figure 5: Teacher's guide C: unit 1 pgs 10 and 11

Instructional Discourse and Regulative Discourse Categories	Activity: Exploring poetry – read a praise poem LO 3: Uses reading strategies: uses strategies to work out meaning of words LO 3: Shows understanding of how reference books work; uses a dictionary; understands dictionary entry		
Content (what) and theory of instruction (how) provided	Teacher told to use friendship trees from previous lesson to stimulate discussion on features and benefits of trees. Under Teaching Guidelines, teacher told to let pupils discuss in pairs or groups. Teacher to read a praise poem to pupils if possible. Praise poem "In praise of the Tree" provided in LB [pg. 8] Key vocabulary provided. Pupils to then discuss praise poems Pupils to use dictionaries, glossary in LB or Help box to find out meanings of unfamiliar words		
Information provided to assist understanding of what is required of them.	Teacher to encourage pupils to use reading strategies such as context to help them understand unfamiliar words. They are also to use the glossary in the LB or the Help box on pg. 9. Pupils may work in different groups to allow them to benefit from working with others.		
Clarifies necessary skills required to perform activities prescribed	No		
Clarifies reasons for doing what is suggested	Learners to use reading strategies to help with decoding of words in poem that are unfamiliar to them.		
5. Models sequencing and pacing	Sequencing provided but pacing is weakly framed. Teacher is to allow 'some time' for pupils to read lists compiled by other groups.		
6. Explains manner of behaviour, conduct expected from teacher/pupils	Pupils to work in pairs or groups. Teacher to 'encourage' pupils to use different strategies to decode unfamiliar words. Pupils should still 'enjoy' the poem. Teacher to check pupils know how to use a dictionary.		
7. Indicates classroom organisation necessary	Friendship trees from previous lesson to be on display in classroom. Lesson takes place in the classroom.		
8. Indicates teacher/pupil interactions required	Teacher acts as facilitator guiding the process. Pupils work in pairs or groups - discuss features and benefits of trees, read a praise poem in groups and answer questions in LB. Teacher to informally assess pupils on how they work in their groups: sharing of tasks; time management; keeping to the topic. As extension activity pupils to see most frequently used words on group lists and to provide reasons for this.		

Figure 6: Teacher's guide D: unit 1 pgs 10 and 11

Instructional Discourse and Regulative Discourse Categories	Activity: Reading in groups – Ask and answer questions LB [6–7] Talk about a map LO 3: AS Reads a text [fiction or non-fiction] Identifies purpose, audience and context LO 3: AS Reads for information: Follows information texts [e.g. a description of a process] Reads simple diagrams, graphs and charts Summarises information LO 5: AS Collects and records information in different ways Selects relevant material and takes notes Transfers information from one mode to another	
Content (what) and theory of instruction (how) provided	Map of Sol Plaatjie's travels and story of Sol Plaatjie; a boy who loved to learn [LB pg. 10 & 11]. Teacher to ask pupils to ask and answer questions in groups about people they've read about. Pupils to look at map and talk in groups about all the information they can find on the map. As a support activity pupils can look at other maps in pairs and talk about what they find. Teacher to assess how well pupils ask and answer questions [diagnostic group assessment] and how well they interact [formative pair assessment]. Other assessment is: peer assessment; continuous individual assessment; and self-assessment. Pairs of pupils to answer questions to 'Identify Information' and to check their answers with another pair. Pupils work individually at reading the text and answering the four questions provided either in the class or at home. Teacher to collect answers or do as whole class exercise. Answers to questions are provided but answer to no. 4 is given as 'personal response'. Pupils have to make a mind map to show how Sol Plaatjie learned. A mind map diagram is provided in LB pg. 11. Pupils to check their own understanding of the text by answering questions about how they found information on Sol Plaatjie. Pupils are asked to write a paragraph about Sol Plaatjie using the text, their answers and the mind map.	
2. Information provided to assist understanding of what is required of them.	Under the heading 'Peer assessment' the teacher is asked to see whether the pupils can answer questions and if they demonstrate an understanding of audience and purpose of text. A mind map is a useful study method. In assessing the mind maps the teacher needs to see whether the pupil can draw and complete a mind map and whether note form is used.	
Clarifies necessary skills required to perform activities prescribed	No	
4. Clarifies reasons for doing what is suggested	Continuous individual assessment on whether pupils use the information in the text to answer the questions and if the pupil compares subjects in the text with own subjects. Teacher needs to point out that using a dictionary is a useful way to find information. Teacher to assess whether pupils can transfer information from the text into a written paragraph	

5. Models sequencing and pacing	Begins with whole class activity and then pupils work in pairs and individually. No pacing provided.
6. Explains manner of behaviour, conduct expected from teacher/pupils	Tasks are allocated to be led by either teacher or pupils.
7. Indicates classroom organisation necessary	No
8. Indicates teacher/pupil interactions required	Teacher acts as facilitator guiding activities. Pupils work in pairs or individually to complete tasks.

Figure 7: Snapshot description of four teachers' guides

	A	В	C	D
Date published Publisher Place	2004 X Cape Town	2005 X Cape Town	2005 (1998) Y Cape Town	2005 (1998) X Cape Town
Size	17 x 24 cm	16.5 x 24 cm	17 x 24 cm	16.5 x 24 cm
Number of pages	108	120	144	128
Paper quality	White pages, thickish texture	Newsprint, jotter type pages creamy colour	White pages, thickish texture	White pages, thickish texture
Visuals/graphics	None	None	None	None
Unit/Chapter One	Bring with me life	Spell Well	The Friendship Tree	Learning to Learn
Answers provided	No	Yes	Yes	Yes
Extra reading or activities provided?	Extra reading texts provided in 'Good Reads' section of textbook	Reading supplement – anthology of texts available	Language practice book available	Reading supplement – anthology of texts available
			Workshops offered in all provinces	Workshops offered in all provinces

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Teacher educators in South Africa: something amiss with their academic performance?

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Abstract

According to some observers, academics responsible for teacher education in South Africa and elsewhere traditionally have not enjoyed great esteem as academics from their colleagues in other disciplines and university structures. This is not only because of the nature of their subject, but also because they prepare students for one of the less esteemed professions, namely school teachers. Data from the South African part of the 22 country survey known as the Changing Academic Profession Research Project (CAP)(2007/8) confirm that their academic performance was not quite as high as that of their peers in other academic fields. The CAP data further suggest that their lower academic performance, operationally defined as research publication output, might among others be related to them feeling less in control of their professional environment than their peers in other disciplines, especially at departmental level. The discussion also reveals several shortcomings in the CAP survey and the data it provides.

Introduction

There is a widespread notion that teacher educators/educationists are held in low esteem by their peers in other academic schools and faculties. Approximately ten years ago, David F Larrabee (1998) wrote an argumentative article based on personal observations about the development of scientific knowledge entitled *Educational researchers: living with a lesser form of knowledge*. He made a number of observations that did not make pleasant reading for educationists. He firstly mentioned that schools of education made easy targets for criticism, and that education-school bashing had been a favourite sport for a wide range of participants over a long period of time. In his opinion, schools of education and educationists possess a number of characteristics that make them vulnerable to attack. Among these

are their lowly origins in 19th century normal schools, and the low social standing of their primary clientele (disproportionately drawn from the ranks of women and the working class; men and women from the upper classes tend to enter into the higher professions and private business) and the fact that they prepare students for one of the lesser professions, i.e. school teachers. Larrabee (1998, p.4) concluded that: ". . .its curriculum and academic standards are generally considered weak and their faculty and students less able than their counterparts elsewhere in the university".

Already some three decades before this article, King (1965), in his descriptive study of education in the United States, observed that academics from other schools were of the opinion that their counterparts in schools of education 'knew nothing' and had no expertise. Gardiner (2008) recently made similar findings in her literature and documentary study on the history of education faculties/schools at universities in the United States of America, the United Kingdom and Australia. She cites reports testifying to the widespread notion among academics from other fields that educationists are engaged in low level academic work and are regarded with disdain.

Kannemeyer (1990), reflecting on his own experience in academia, registered similar sentiments in connection with how other academics viewed the status of educationists in South Africa. Quite recently, a qualitative empirical investigation, based on a series of personal interviews regarding perceptions of themselves held by the members of a faculty of education at a South African university, as well as those held by external stakeholders, including staff members of other faculties, supported these views about educationists/teacher educators (G3 Business Solutions, 2005).

Research problem

The question that confronted us, in view of the above, was whether there was reason to conclude that there was something amiss with the academic performance of teacher educators at South African institutions of higher learning (also hereafter occasionally referred to as 'academics attached to schools/faculties of education', 'teacher educators', 'educationists'). Is their academic performance indeed in some respects significantly lower than that of their colleagues in other academic disciplines? If so, to what can this state of affairs be ascribed?

Specific research questions

The research problem was broken down into the following research questions:

- What are the contextual demands (in particular the exigencies stemming from the current socio-political dispensation and reconstruction) impacting on South African academics in general and on teacher educators in particular, and to what extent can these conditions be blamed for the alleged lower academic performance of South African educationists?
- How does, according to the Changing Academic Profession Research Project (CAP) (2007-2008) data, the academic performance of teacher educators compare with that of academics in other disciplines?
- If there is a difference between the academic performance of teacher educators and other academics, to what can it be ascribed – according to the CAP data?

Rationale for the study

South African educationists, like all academics in the country, have had to cope with a wide array of extraneous influences since 1994. Investigation was required to determine whether these conditions uniquely impacted on the academic performance of teacher educators/educationists, or whether their level of academic performance could be ascribed to factors reflected in the CAP data.

Methodology

We begin with a brief description of the trying socio-political conditions with which South African academics in general have had to contend since the early 1990s. If King, Larrabee, Kannemeyer, Gardiner and others referred to above are correct in their views and findings, South African educationists/teacher educators' academic performance would be lower than that of their counterparts in other disciplines, despite all of them working in the same socio-political circumstances. We found the CAP data to have vindicated this surmise: South African educationists' academic performance, operationally defined as research publication output, was indeed lower than that of their

counterparts in other disciplines. We then make use of other CAP data that we conceptually connected to the phenomenon of academic performance for discovering possible explanations for this finding.

In the conceptual, theoretical and historical parts of our discussion, we made use of an interpretivistic approach. We also made use of the method of transcendental pragmatism as described by Alexander (2006). 'Pragmatic' here refers to the actual, practical setting in which we find scholars working and how they view themselves and their work. 'Transcendental' refers to how we seek to improve teacher educators' research output as academics.

The empirical survey referred to above is the Changing Academic Profession Research Project (CAP), a survey of the academic profession in general in 22 countries (see: http://www.open.ac.uk/cheri/pages/CHERI-Projects-CAP.shtml). The following aspects of academic life and work in those countries' were surveyed: biographic particulars, teaching activities, research activities, international profile, experience of university governance and professional working environment. The CAP survey was done among academics in South Africa in 2007/8.

Theoretical and conceptual framework

Academia in South Africa, including teacher education, in the white waters of transformation

Since the advent of the new political dispensation in South Africa in 1994, teacher education as well as other disciplines have been finding themselves in the throes of three forms of transformation that were taking place simultaneously. There is a possibility that the fact that academics had to deal with the combined challenges of these three forms of transformation had made it difficult for them to concentrate on the scholarly aspects of their disciplines, teacher educators arguably to a greater extent than their colleagues in other disciplines, as will be shown. In the case of teacher educators, their confrontation with the ongoing educational transformation processes could have meant less academic focus on theory development about teacher education *per se*, curriculum theory and development, developing best practice in teacher education, and so on.

The demands of the new socio-political dispensation

The first of the external forces that impacted on the academic work of academics in general was the exigencies of the new socio-political context. The 1994 Interim Constitution (RSA, 1994) and the 1996 Constitution (RSA, 1996) transformed South Africa into a liberal democracy on the Western model, with one of the most progressive Bills of Human Rights in the world. In this context, teacher educators had to contend with the arduous birth of a new education system based on the principles of equality of opportunity, desegregation, multiculturalism, equity, redress, integration and articulation between sectors, levels, and courses (Wolhuter, 1999; RSA, 2008). The new system was being geared towards the realisation of the potential of the entire population, with the societal and national objectives of economic development and the moulding of national unity. Teacher educators, in particular, had to face two major reforms in this regard:

- Outcomes-Based education, the associated curricula of which were repeatedly revised and refined between 1996 and 2008, currently known as the National Curriculum Statement, aimed at replacing the pre-1994 content-based education which was condemned as an apartheid strategy for promoting rote-learning and a culture of submissiveness, and the
- South African Qualifications Authority (SAQA) with its National Qualifications Framework (NQF), instituted for creating a network of lifelong learning and training for all South Africans, including standardsetting by SAQA's three Quality Councils.

The introduction of these reforms brought about a radical reshaping of education in South Africa. Many of the principles underlying the reforms were the diametrical opposite of pre-1994 theory and practice. Higher education too had to be reformed in line with the new societal imperatives and concomitant education policies (Kruss, 2008). Programmes offered by universities had to be accredited by the South African Qualifications Authority in accordance with the National Qualifications Framework. The principles of democratisation and equality of opportunity brought about a demand for greater access to higher education ('massification'). Higher education enrolments in South Africa resultantly increased from 495 355 in 1994 to 632 911 in 1999, and to 741 380 in 2006 (UNESCO, 2009).

The neo-liberal economic revolution and government domination

The second of the contextual forces that impacted on the work of South African academics was the advent of a neo-liberal economic revolution (global acceptances of the capitalist or free market system). This is part of a societal trend that has been affecting universities worldwide. The concomitant curtailment of university autonomy has also been a common phenomenon in the history of universities in Africa during the post-1960s' decolonialisation period, a trend characterised by governments taking steps to ensure that their wishes were carried out by harnessing universities to the achievement of their political objectives (Warner, 2004). To this end, governments, as the main sources of funds for most universities, assumed ever more say in the affairs of the universities (Wolhuter and Higgs, 2006). This tends to impinge on the academic autonomy of institutions of higher education in that business principles such as accountability, quality control, managerialism and profitability are applied to their management.

Political commentator Duvenhage (2008) noted that between 1994 and 2003, no fewer than 870 pieces of legislation had been promulgated by Parliament for the purpose of regulating the political transformation processes in South Africa (Pillay, 2006).

The Council of Higher Education Independent Task Team on Higher Education Institutional Autonomy and Academic Freedom's (CHE-HEIAAF) (2008) inquiry also commented on this trend. According to this Task Team, the bureaucratic arm of government could be seen to have particular potential to threaten academic freedom with overreaching efforts to consolidate power and control within the system in the name of particular goals (e.g. 'efficiency'). It found in an overview of the tendencies in government's steering of higher education (Section 3.1 of the Report) that government had been defining 'steering' progressively more sharply since 1997 through legislative change and policy developments in planning, funding and quality assurance. In its overall evaluation of the regulatory environment in which South African academics work, the Task Team observed that, "even if flagrant instances of government interference are hard to pinpoint, government's steering of higher education has in recent years – most sharply between 2001 and 2004 – grown more directive, less consultative, and occasionally prone to hierarchical decree" (p.xi).

This has impacted especially heavily on the work of teacher educators. They are today doing their professional work under a rather complicated statutory umbrella consisting of no fewer than 13 Acts of Parliament and a variety of other policy documents. Educationist and ex-dean of a Faculty of Education at a prominent South African University, Jansen (2004), pointed out that in addition to all such directives regarding research, student numbers, the trustworthiness of courses and the future of institutions of higher learning, it was the state that determined teacher education curricula, and decided which programmes and courses would be taught. In his opinion, "a university ceases to be a university when its intellectual project no longer defines its identity" (Mischke, 2004, p.11). Teacher educators/educationists seem to have arguably lost more control of their professional domain than any other group of South African academics.

Another effect of the neo-liberal trend was that universities as ivory towers began crumbling and stronger links were being forged with community and society. As universities had to supplement dwindling public funds with funds raised from private sector sources, the private sector also tended to gain a bigger say in university affairs. The neo-liberal economic policies to which the South African government has been subscribing (it really had no other option in the post-1990 global environment) also meant that universities, because of lower government subsidies, had to resort to principles of business enterprise. This new mind set began to dictate university management and administration (Mickelson, Nkomo and Smith, 2001; Slater, 2004).

All these factors and circumstances have been contributing to an erosion of academic freedom at South African universities. As government intervention grew in prominence, universities succumbed to accountability requirements, quality control and managerialism (Webster and Mosoetsa, 2002; Ntshoe, Higgs, Higgs and Wolhuter, 2008).

According to educationists Jansen (2004) and Bundy (2005), South Africa's academic community did not enjoy the privilege of being gradually introduced to all the reforms and tendencies after the advent of the new socio-political dispensation in 1994 and after the country's re-incorporation into the international mainstream, as was the case with institutions of higher education elsewhere in the world (these shifts occurred worldwide in academia). It appears from the above that especially for educationists the confrontation was rapid and intense, with the result that they became caught up in the contextual turmoil, and to a certain extent could not apply their minds and energies to their academic work.

Internationalisation

The third major change in South African academics' professional lives was their reintegration into the international academic community after having been cut off for three decades (1960–1990) as part of an international academic boycott. The boycott formed part of the international community's protest against the segregation policies of the pre-1994 South African government (Harricombe and Lancaster, 1995).

In the period 1990 to 2002, South African academics recovered most of the lost ground. By applying the questionnaire of the *Carnegie International Investigation into the Academic Profession* (the first international survey of the academic profession, *see:* Altbach, 1996) to a sample of the South African academic profession during 2001–2002, Wolhuter and Higgs (2004) found that whereas the international academic boycott still had a visibly negative effect on the *ten*-year period before 2001–2002, when considering the *three*-year period up to 2001, the effect had been wiped out by 2001, and that the South African academic profession had by 2002 become even more internationalised than the international norm. However, the CAP International Survey (the second international survey of the academic profession) during 2007/2008 revealed that in the period between 2001 and 2007 the South African academic profession's performance had again fallen to slightly below the international norm (Wolhuter, Higgs, Higgs and Ntshoe, 2008).

Broadly speaking, all three of the transformation forces mentioned above impacted in the same measure, though conceivably in different ways, on academics working in the various disciplines in higher education institutions. In some ways they seemed to have had a greater negative impact on the professional work of teacher educators/educationists. Although the post 1990 socio-political conditions in South Africa and worldwide might have impacted slightly more negatively and differently on the academic performance of South African educationists, the above overview does not provide grounds for concluding that their academic performance should be resultantly lower than that of their academic counterparts who worked under similar conditions.

Factors that may impact on academics' academic performance

Several theorists have identified academic performance as an important determinant of how academics view themselves and compare themselves with

their peers. In the process, they have proffered a number of possible theories that could assist with contextualising and explaining this determinant. For the purpose of the theoretical framework of this investigation, we chose to limit our discussion to the following six interrelated theories: (a) symbolic interactionism, (b) detached pragmatism, (c) social comparison, (d) social identification, (e) social adjustment and (f) perceived instrumentality.

In 1995 already, Osborne (1995) pointed out that symbolic interactionism viewed self-concept to be essentially a reflection of others' appraisals of oneself. According to this perspective, positive feedback in Faculties of Education should lead to more positive self-evaluations among individual educationists, whereas negative feedback should lead to more negative selfevaluations. This is corroborated by the theory of *social comparison* and by the theory of social identification. Social comparison theory suggests that academics doing poorly in academia would suffer loss of esteem if they were to compare outcomes with somebody doing better (Osborne, 1995) – which is what they are effectively doing when they evaluate the feedback that they receive from their peers' appraisal(s) of themselves as co-academics. Conversely, someone who does well as an academic can compare his or her outcomes with others doing less well, an action that benefits the self-concept of the academic.

There is, however, an important difference in semantic value between the theories of social comparison and social identification. According to Osborne (1995: passim), academics' identification with their fellow academics (either in their own faculty or in other faculties in the University) relates strongly to their own academic standing within their (academic peer) community. This means that – in general – poor performance in the Faculty of Education may well lead (based on social comparison and social identification) to an overall negative perception of own abilities as academics in such a faculty (Kruss, 2008). It is in this regard that the work of Adler and Adler (1985) on their theory of detached pragmatism seems to provide import to the inference that most South African teacher educators who were offered positions in Faculties of Education at universities after the incorporation of the former teacher education colleges into Higher Education institutions in 2001, may initially have been optimistic and may have had idealistic goals and attitudes about their impending careers as academics in Higher Education. The institutional culture in the Faculties of Education in the universities where they were employed seemed, however, to differ in important respects to that of the teacher education colleges to which they had been accustomed for many years (Kruss, 2008).

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One of the possible manifestations of this state of affairs may be that poor performance by academics in Faculties of Education represent a lack of mastery over their academic environment; this may then lead to a negative view of themselves as educationists (Kruss, 2008; Osborne, 1995: passim). According to the theory of detached pragmatism (Adler and Adler, 1985) and the theory of social adjustment, put forward by Oliver, Rodriguez and Mickelson (1985), it seems academically reasonable to speculate that this fact, coupled with educationists' academic socialisation, classroom and Higher Education's bureaucracy-related experiences may lead them to become progressively detached from their fellow-academics in other faculties. As a result, they may be forced to start making social, as well as pragmatic adjustments, abandoning their earlier aspirations and expectations and gradually resigning themselves to inferior academic performance on the basis of these adjustments (Adler and Adler, 1985; Oliver et al., 1985).

Finally, the theory of *perceived instrumentality* (which may be viewed as a theoretical extension of the social cognitive perspective of self-regulation proposed by Bandura) claims that the personally valued future academic goals of, for example, educationists serve to increase the incentive value of their proximal academic tasks in all instances where such proximal academic tasks may be perceived as being instrumental to the attainment of their future academic goals (Miller, Debacker and Greene, 1999: passim). This theory highlights the important role played by, for example, educationists' perceptions of the supposed connection between their official academicallyrelated duties and their valued future academic goals. It suggests that efforts to facilitate perceptions of the instrumentality of that which academics understand to be their 'academic' work may be critical to fostering increased proximal motivation for (in casu) educationists (ibid.). Although the available research seems to suggest that the future academic goals of academics might have incentive value, they are typically viewed as too far off, or too general, to shepherd specific actions in immediate situations that present many uncertainties and complexities (*ibid.*). This means that, for example, educationists are obliged to create for themselves proximal guides and selfmotivators for courses of action that may lead to distal attainments. The initial commitment to a valued distant academic goal then becomes the catalyst for the process of developing proximal academic goals (*ibid*.).

When educationists commit themselves to personally valued future academic goals, they are in a position to generate purposefully a coherent, instrumental framework or system of proximal academic sub-goals to help guide their actions toward the attainment of those valued future academic goals. In the

case of our investigation, this begs the question whether teacher training is, de facto regarded as an important instrumental framework of academia. In this regard, Osborne (1995) suggests that success or failure in any particular instrumental framework will affect an individual's self-esteem only to the extent that that particular instrumental framework is considered relevant or important. Thus, if teacher training in Faculties of Education is considered an important instrumental framework of and in academia, then it should be possible to assume that academic performance within such an instrumental framework will have a strong impact on, for example, educationists' selfesteem (Kruss, 2008).

In many respects, the above-mentioned six theories appear to be conceptually complementary. Combined, they provide an understanding of the reasons why educationists' academic performance may not always be on par with that of their peers in other faculties within the university. They do not, however, provide us with a sufficient means of measuring – in operational terms – educationists' academic performance (relative to that of their peers in other faculties). This particular hiatus forced us to also reconceptualise the measurement of academic performance in operational terms.

Measuring academic performance

There has been some controversy about the use of so-called operational definitions in empirical research. Scriven (1988, p.136), for instance, argued convincingly against the neo-positivist doctrine of using operational definitions, i.e. "the kind of definition which equates a concept with the results of certain measurements". In his opinion, operational definitions are not helpful or accurate accounts of the concepts or constructs that they are supposed to define, and that hardly gives one confidence about how they would reflect the new concepts that they embody. Research expert Neuman (2000, p.158), on the other hand, sees a place for operational definitions in empirical research: "Conceptualization is the process of taking a construct (such as 'academic performance') and refining it by giving it a conceptual or theoretical definition. A conceptual definition is a definition in abstract, theoretical terms. It refers to other ideas or constructs". Blackburn (1996, p.222) concurs, and refers to this process as "logical construction".

After weighing several pros and cons regarding the use of operational definitions, we decided to use an operational (measurable) definition of 'academic performance' but to augment the process of 'operationalisation' 208

with further conceptualization. We operationalised the construct 'academic performance' as: quantitatively measurable output in terms of books, scholarly articles and research reports (note: the CAP survey does not provide qualitative data). Mindful of the six theories discussed above, we then conceptually connected five sets of variables from the CAP survey to this operational definition of 'academic performance', based on our interpretation of these theories: academics' working hours (perceived instrumentality, social adjustment); how academics rated the physical research facilities at their disposal (perceived instrumentality, detached pragmatism); their assessment of their relations with management at different levels (social comparison, social identification); their perceptions of their influence on their academic environment at different levels (symbolic interactionism), and their job satisfaction (detached pragmatism, social comparison). We conceptualized these five sets of variables in terms of causation, explanation, intention, meaning and valuing with the purpose of showing that all five of them cast light on the notion of 'academic performance' and can provide insight into a certain group of academics' (in casu, South African educationists') higher or lower academic performance.

We conceptualised the link between academic performance and the five sets of variables as follows: (a) working hours relate directly to academic performance in the sense that, if educationists/teacher educators worked the same number of hours as all other academics, their academic performance should be roughly the same; if not, there must be another explanation for their lower performance; (b) optimal working conditions, good physical facilities and good support structures are conducive to high academic performance, and vice versa; (c) good relations with management at the various levels create an institutional climate conducive to higher academic performance; strained relations will be detrimental to academic performance; (d) respondents' perception that they were exerting meaningful influence on their academic surroundings at the various levels would be conducive to higher academic performance, and vice versa; and (e) respondents who experienced optimal job satisfaction would arguably perform better than those who were frustrated in and by their profession.

In conclusion: bearing in mind that the CAP survey referred to in the next paragraph does not work with or provide qualitative data, we proposed – for purposes of this investigation – that the construct 'academic performance' be understood: *operationally* as quantitatively measurable output in terms of books, scholarly articles and research reports and *conceptually* as the function of one or a combination of the following six theoretical indicators, namely

detached pragmatism, perceived instrumentality, social adjustment, social comparison, social identification and symbolic interactionism.

Empirical research design/CAP survey

Aim of the investigation

The CAP data were used for finding answers to the three research questions (see Specific Research Questions above).

Sampling

In South Africa, the CAP survey instrument was completed by a random sample of 700 academics from all organisational levels, faculties/schools, departments and disciplines, drawn from a random sample of 11 universities. 174 of those who completed the questionnaire were attached to faculties/schools/departments of education. The sample included distance as well as predominantly/historically Black as well as historically White Afrikaans and historically White English universities, and technical universities, i.e. institutions that had not enjoyed university status before 2000. The sample was also geographically diverse in that it contained urban, rural as well as Northern, Central, Southern and Eastern Sea Board institutions.

Analytical techniques

Analyses were made of the responses to items in the CAP questionnaire pertaining to academic performance and to the five sets of variables that we conceptually linked to academic performance. Use was made of the t-test to determine whether the average response of teacher educators differed statistically significantly from that of other academics (i.e. whether a particular difference cannot be ascribed to chance, cf. Scriven, 1988, p.134).

We discuss the results of the CAP survey of 2007/2008 in terms of the responses of academics attached to schools/faculties of education as compared to those of academics in other fields in respect of the above-mentioned sets of variables. In order to place the CAP findings in broader perspective, they will occasionally be compared (at the risk of being somewhat outdated) with the findings of the Carnegie International Investigation of the Academic Profession in the early 1990s in 14 countries worldwide. For some items, the Carnegie Survey data are still the most recent. (As mentioned above, the CAP project provides only quantitative data; no inferences can therefore be made about the quality of, for instance, research output.)

Findings flowing from the CAP survey of 2007/2008

Table 1 confirms the surmise that South African educationists'/teacher educators' academic performance, operationally defined as the publication and editing of scholarly books, academic articles and research reports, was lower in all categories than that of their counterparts in other disciplines.

Category of Academics Indicator of Research Output (number of)	Academics attached to Schools/Faculties of Education	Academics in other fields	t-test
Scholarly books authored or co-authored during past 3 years	1.33	2.56	t=0.13* p=0.8993
Scholarly books edited or coedited past 3 years	0.85	2.11	t=0.18* p=0.8597
Articles published in academic journal or book past 3 years	3.68	3.71	t=2.60** p=0.0097
Research reports written for funded projects past 3 years	1.12	2.41	t=0.95* p=0.3413

Difference not statistically significant

The question is: to what can their lower academic performance be ascribed? Can it be ascribed to any of the sets of variables from the CAP data that we conceptually linked to academic performance? For instance, can their lower academic performance be ascribed to a lower number of hours spent on academia? The CAP data show that academics attached to faculties/schools of education spend approximately the same amount of time as their colleagues in other disciplines on teaching activities, including lecture preparation, classroom instruction, advising students, and reading and assessing student work. The average time spent on these activities by academics in Schools of Education was 21.21 hours per week, which was somewhat less than that of academics in other fields whose average was 21.62 hours (not statistically significant; t=1.97; p=0.0502). Since South African educationists in 2007–2008 roughly had the same amount of time at their disposal for research and publications as their colleagues in other disciplines the research output of the two groups should have been approximately the same.

Difference statistically significant

Can their lower academic performance then be ascribed to their working conditions? According to the 2007/8 CAP survey, teacher educators' perceived their physical working conditions to be more favourable than those of their counterparts. Teacher educators/academics attached to faculties/schools of education were working in circumstances that had, according to their responses, improved marginally since they had entered the profession as academics, as opposed to those of their counterparts in other faculties, who opined that their working conditions had deteriorated. They (i.e. academics attached to Schools of Education) responded with a mean of 2.57 (i.e. on the positive side of neutral) on a five-point semantic differential rating scale ranging from: 1: very much improved, to 3: neutral, to 5: very much deteriorated. Their counterparts in the other disciplines and university structures responded with a mean of 2.81 (i.e. also positive, though more neutral).

Their ratings with respect to their working conditions (in terms of facilities and resources) were consistently (with respect to seven (7) items, statistically significantly) higher than those of academics in other schools and faculties. According to Table 2, only research funding received a slightly lower rating compared with that of their colleagues in other disciplines. Since both groups of respondents' mean was on the positive side of neutral, it cannot be concluded that this aspect of their work can be blamed for the formers' lower academic performance.

Table 2: Evaluation of facilities, resources and support personnel by South African academics

Average academic's rating of facilities, resources and support personnel		On a semantic differential scale ranging from 1: excellent to 3: neutral to 5: poor		
	Academic faculties/sc of educat	hools	Academics at other academic units	
Research equipment and instruments	2.66		2.96	t=2.96** p=0.0033
Computer facilities	2.12		2.42	t=3.07** p=0.0023
Library facilities and services	1.89		2.16	t=2.28** p=0.0232
Office space	2.22		2.55	t=2.55** p=0.0112
Secretarial support	2.91		3.12	t=2.85** p=0.0047
Telecommunications (internet, telephones)	1.90		2.24	t=2.26** p=0.0244
Teaching support staff	2.96		3.37	t=2.70** p=0.0074
Research support staff	3.32		3.38	t=0.07 * p=0.9479
Research funding	3.18		3.11	t=0.79* p=0.4275

^{*} Difference not statistically significant

Can their lower academic performance then be ascribed to their relations with management? Table 3 shows that as a group, educationists did not seem to have strong opinions about the effectiveness of the communication between management and themselves (their response was slightly on the negative side of neutral). They tended to experience the style of institutional management rather less top-down than their counterparts in other disciplines (2.25 as opposed to 1.99 of their colleagues). While they largely agreed with their colleagues in the other disciplines that the administrative processes at their

^{**} Difference statistically significant

institutions were cumbersome (both slightly on the 'agree' side of neutral), and that administrative staff was not supportive of their research (both slightly on the negative side of neutral), their responses differed slightly as to whether top management was providing competent leadership (academics in Education slightly on the positive side of neutral; academics in other fields slightly on the negative side of neutral). Put differently, they were more positive than their colleagues in other faculties etc. that top management was providing competent leadership. They were likewise more positive about being informed about what transpired at the institution, and about administration supporting academic freedom.

The data in Table 3 inform us that as far as relationships and communication at their respective institutions were concerned, teacher educators perceived their experiences to be more positive than those of their counterparts in other structures and disciplines (statistically significantly in three items). Despite the fact that their colleagues in other structures and disciplines seemed to feel more negative about these matters, their academic performance was higher. Educationists' relations with management can therefore not be blamed for their lower performance.

Table 3: Responses to items relating to relations with management

Question		Mean response on 5 point scale ranging from 1: strongly agree, to 3: neutral, to 5: strongly disagree		
		Academics at Schools of Education	Academics at other units	
	good communication between management and academics	3.16	3.70	t=2.61** p=0.0096
_	a top-down management style	2.25	1.99	t=1.96* p=0.0707
_	a cumbersome adminstrative process	2.37	2.06	t=1.97*
_	a supportive attitude of administrative staff towards research	3.12	3.37	t=1.10** p=0.2738
	ews on following			
iss -	top level management is providing competent leadership	2.89	3.52	t=3.20** p=0.0015
_	I am kept informed about what is going on at my institution	2.71	3.24	t=3.10** p=0.0021
-	the administration supports academic freedom	3.07	3.39	t=1.40* p=0.1624

^{*} Difference not statistically significant

^{**} Difference statistically significant

Can educationists' lower academic performance then be ascribed to their perception of how influential they thought themselves to be in helping shape key policies at each of the following levels: department, faculty/school, and institution? Table 4 might contain a key to understanding why teacher educators did not perform as well as their counterparts in other structures and disciplines as far as research output was concerned.

Table 4: Mean responses to question: 'How influential are you in helping shape key academic policies?' Mean ratings on 4-point scale ranging from: 1: very influential, to 2: somewhat influential, to 3: a little influential, to 4: not at all influential

	Academics at Schools of Education	Academics at other units	
At departmental level	2.49	2.19	t=2.01* p=0.0352
At faculty/school level	2.90	2.90	t=1.13** p=0.2595
At institutional level	3.31	3.59	t=0.35* p=0.7253

^{*} Difference not statistically significant

This Table shows that while teacher educators and their colleagues in other disciplines and structures felt slightly on the negative side of neutral (2.50) as far as their influence at faculty/school level is concerned, and whereas all of them (their colleagues more so) felt that they had minimal influence at institutional level, the teacher educator respondents indicated that they were less influential at departmental level than their counterparts. This finding may hold the key to the conundrum that we have been dealing with so far, namely why teacher educators' academic performance was not as high as that of their colleagues in other disciplines. Since the CAP data do not provide qualitative information about this phenomenon, one can at this stage only conjecture about the reasons for it. Could it be that their immediate supervisors at departmental level denied them meaningful influence in how they should practise their particular sub-discipline in education science? Could it be that their immediate departmental heads forced or coerced them into, for instance, administrative and committee work to the detriment of their scholarly work? Could it be that at departmental level they were so inundated by extraneous exigencies that influence at that level was to no avail anyway? Could it be that the practical

^{**} Difference statistically significant

work associated with teacher education distracted their attention from academic work? Or could it be that at departmental level their work was less effective (less able to reach stated aims and goals) and efficient (less able to reach stated aims and goals with the resources available)? Or could it be that teacher educators do not place a high premium on research – that they see themselves as teachers/educators rather than as researchers?

Finally, could South African educationists' lower academic performance be ascribed to lower job satisfaction? When the respondents were asked to rate their overall satisfaction with their current jobs on a five-point scale ranging from 1: very high, to 3: neutral, to 5: very low, academics at faculties/schools of education responded with a more favourable mean than other academics (2.47 as opposed to 2.66). One would have expected greater job satisfaction to reflect in higher academic performance. Is this finding also proof that educationists indeed do not place such a high premium on research as their counterparts in other disciplines?

Discussion and recommendation

The transformation processes in post-1994 South Africa affected all South African academics to approximately the same extent, though arguably in different ways. Despite this, the academic performance of the educationist-respondents in the 2007/8 CAP survey was lower in all categories than that of their counterparts in other academic fields. Why this should be the case is not clear from the CAP data. The CAP survey does not provide pertinent answers to this qualitative question.

The CAP data also suggest that, with the exception of educationists perceiving that they had somewhat less influence on the decision-making processes in their immediate academic surroundings, i.e. in their academic departments, educationists' lower academic performance can be ascribed to none of the sets of variables that we had conceptually linked to academic performance. Why their lower academic performance can be linked to their perceived lack of influence on their immediate academic surroundings – their departments – remains unclear. A number of possible reasons were enumerated above. This finding should be subjected to further qualitative research. Among these count the possibility that teacher educators tend to see themselves as educators, and not necessarily as researchers and publishers of scholarly articles.

Generally speaking, educationists were slightly more positive about their academic experiences than their counterparts in other academic fields. This was, however, not reflected in their research output. While their responses constituted an encouraging indication of the relative well-being of a part of the South African education project, namely that of teacher education, there is scope for improvement. A mean of only 2.47 on a five-point scale (on the positive side of a neutral 3) for job satisfaction implies that a long road still has to be travelled for providing an optimal professional environment for teacher educators.

The low research output of academics at faculties/schools of education at South African universities is a weakness in higher education. Given the magnitude of South Africa's problems in the field of education, the challenges of the fundamental reconstruction of education, and the need to guide these with research outcomes, the rather poor research output remains a cause of concern.

This study has unmasked a shortcoming of the CAP survey, namely its inability to offer qualitative data about a key issue in higher education – academic performance. The CAP research team should consider incorporating the following four essential changes into the CAP instrument. Firstly, they should rethink academic performance as the function of one or a combination of theoretical indicators such as detached pragmatism, perceived instrumentality, social adjustment, social comparison, social identification and symbolic interactionism. Secondly, they should operationally conceptualise the construct (concept) 'academic performance' and provide items for testing for each of the operational definitions that emerge. Thirdly, they should provide opportunities for the inclusion of qualitative data about key issues in higher education, such as the reasons for higher or lower than expected academic performance. Finally, they should conceptually link the material (socio-political) conditions that could impact on academic performance to the construct 'academic performance', and provide for items that would test for this impact. Further qualitative research will have to be done for the purpose of discovering to what extent the extraneous socio-political circumstances and forces impacted on the work of teacher educators/educationists. This study suggested that these circumstances and forces might have had a unique effect on the academic performance of educationists, but this has to be pertinently verified.

Conclusion

Having subjected the problem of the alleged lower academic performance of South African educationists to investigation from several angles based on the CAP data, we found that the academic performance of teacher educators in South Africa, defined as measurable research output, was indeed not as high as that of their counterparts in other faculties and schools in the three years prior to 2007/8. We also found that while they had to cope with the same wide array of extraneous influences that other academics were confronted with, and though these circumstances arguably impacted differently on their professional lives and work, their lower academic performance cannot be ascribed to the impact of these transformation forces alone. The CAP data suggested a possible reason for their lower academic performance: teacher educators having the perception of exerting less meaningful influence on their own immediate working conditions than their colleagues in other disciplines.

Academics working in faculties/schools of education and their management structures should apply their minds to the removal of this obstacle, the first step of which should be to explicate the factors behind their lack of power over of their immediate academic environments.

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Referees provide their crucially important service for no reward, and are sometimes unable to oblige on time but we endeavour to respond within three months.

Can I send my submission by e-mail?

Only if you live in a place where submission of three hard copies is inordinately difficult or expensive, please. The norm is three hard copies sent to our office. The electronic version of the article may be sent as an email attachment, or on a disk included with the hard copies.

To what extent should an article being submitted be presented in 'the style' of the journal?

Citation and referencing should be in the style of the journal (see the previous section 'Notes for Contributors'). Authors are not expected to reproduce the particular fonts and font sizes used in the journal, but the levels of headings and subheading should be clear on the hard copies submitted. With regard to the electronic version of the article, we prefer as little formatting as possible.

Does the journal have a policy to encourage and support budding novice researchers?

Unfortunately not – this is simply beyond our capacity. While we welcome extended comment that referees may be able to offer, we cannot impose on their good services beyond the expectation of an overall judgement on the article, together with brief justification of that judgement.

What is the rate of acceptance/rejection?

The following statistics for 2008 and 2009 provide an indication of the pattern of acceptance/ non acceptance:

Year	Accepted with no or minor revisions	Accepted after revisions	Not accepted
2008	2	9	26
2009	3	16	42

Even an increase in the number of issues each year will not keep pace with the ever-increasing number of submissions. We can do little to mitigate the competition engendered by state funding policy and the kinds of incentive schemes that have become a feature of the higher education landscape.

Is there an appeal mechanism should my article not be accepted? Beyond summarizing reasons for rejection – where applicable – we regret that we are unable to enter into detailed discussion on decisions reached by the Editorial Committee on the basis of referee reports.

The journal describes itself as providing "a forum for scholarly understanding of the field of education". What does this really mean?

We understand this as implying that articles should represent a rigorous enquiry (conducted through argumentation or empirically) into the understanding of educational issues. Such inquiry originates in a problem rather than a solution, and it is rare for such enquiry to have no reference to, or engagement with, a broader literature and theory. Advocacy in the form of prescriptions or 'how to do it' recipe knowledge for practitioners seldom finds favour with referees. The question of audience is key. The assumed audience is the collective body of researchers rather than those more narrowly concerned with the effective implementation of specific policies.

Recent non-acceptances include a high proportion of undeveloped research reports, summaries of dissertations, and even sound but small-scale case studies that are purely context specific and unconnected with broader issues, literature or theory. Similarly, even a successful conference paper is usually in need of further development before it merits publication.